

AMERICAN RAILROAD JOURNAL, AND ADVOCATE OF INTERNAL IMPROVEMENTS.

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D. K. MINOR, EDITOR.]

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AMERICAN RAILROAD JOURNAL, &c.

NEW-YORK, MARCH 1, 1834.

In reply to the oft repeated inquiry "has Mr. Vignolle's promised article on Roads and Railroads yet appeared," we can only say that it has not, but we hope soon to receive it.

The letter of L. B. W., of Fort Wayne, Ia. is received, and his request attended to, relative to C. G. V. The paper containing the communication to which he alludes, has not been received. We are obliged to him for his suggestion relative to a tabular view of all the railroads in the United States. The propriety and utility of such a measure has more than once occurred to us, but hitherto we have been unable to obtain the necessary information, and for the present, other engagements do not admit of our undertaking the compilation. We shall endeavor, however, in the course of the present volume, to present our readers with a list of railroads in the United States, with a statement of their length, mode of construction, cost, &c. &c., and shall, therefore, be obliged to those engaged in their superintendence, to give us data for the purpose.

Locomotive Engines—Historical Retrospect. Compiled from the Report of the Committee of the House of Commons, of August, 1831. [From the London Mechanics' Magazine.]

The first locomotive engine was invented twenty-eight years ago, by the late Mr. Trevithick, a very ingenious man, and subsequently improved and used by Mr. Blenkinsop and others, for the service of collieries.

Mr. Gurney stated that his carriage weighed only 2½ tons; that in 1826 he began to work it: that in 1826 he went up Highgate and other hills; and in 1827 he went to Bath. that he has run 18 to 20 miles an hour.

that he is able to compete with the coaches, with an advantage, as 2½ 10s. to 15s. per hundred miles.

that he makes no noise.

N. B.—Mr. G. run his carriage for some time between Cheltenham and Gloucester, to the great loss of his supporters, Sir Charles Dance and others.

Mr. Hancock stated that his carriage weighed 3½ tons, that, with a piston of 9 inches, he has worked at 400 lbs., and on an average at from 60 to 100 lbs. on the square inch; consequently, could exert a power of 13 to 90 horses.

that he makes only one-third of the noise of others.

Mr. Farey stated that Mr. Hancock and the Messrs. Heaton were the only candidates likely to prove successful.

suggested that there should be 2 horses at every hill, for the help of these locomotives. stated that passengers were annoyed from heat, noise, smoke, and dust.

N. B.—The Messrs. Heaton, residing at Birmingham, were not examined.

Mr. Ogle stated that his engine is 20 horse power, with a pressure of 250 lbs. on the square inch. that his carriage weighs 3 tons. has gone at the rate of 32 to 40 miles per hour—and has ascended hills at the rate of 16½ miles per hour.

explosion impossible. he is on the point of establishing a factory, so great are the demands for his carriage!

Mr. Gibbs was very sanguine in his hopes of success—proposed to plough, and drive vans.

Mr. Summers (the partner of Mr. Ogle) stated that they had constructed 2 carriages, weighing 3½ tons, besides passengers.

that they had carried 9 persons at the rate of 9 miles, when the crank broke, and the carriage was sent back by canal.

has carried 19 persons at the rate of 10 miles. has travelled at the rate of 30 miles during 4½ hours frequently; consequently 135 miles in 4½ hours.*

has ascended Shirley-hill, which is 1 foot in 6.

Such was the state of the locomotives in 1831.

Observations.—In 1833, Mr. Gurney, the most persevering of all the competitors, is beaten out of the field, to his great cost.

Sir Charles Dance, his substitute, has run many times to Croydon and Greenwich—made an attempt to go to Birmingham, in which he failed—and made, lastly, an attempt to run daily to Clapham, in which also he has failed.

Messrs. Hancock, Ogle, Gibbs, Summers, and Heaton, are all in movement, but merely by convulsive starts; although they are provided with powers that may be raised to twenty, thirty, forty, and eighty horse power.

About twenty years have passed away in experi-

* Mr. Summers afterwards explained that what he meant to say was, that he had travelled "for the space of four miles and a half—not four hours and a half—at the rate of thirty miles an hour."—[Ed. M. M.]

ments, and not less, probably, than 100,000l. have been expended upon them; yet, after all, nothing effectual has been done.

At one period steam guns were the terror of many: they were to have mowed down whole ranks of infantry and cavalry; even artillery were to be quite impotent before them; but nobody now hears or dreams of such things. It would almost seem as if steam-carriages were destined to run the same course. The writer hopes not; but if he were to look for grounds to anticipate a different result, it would not be in any of the prospectuses for steam-carriage companies that he has seen, of which the best that can be said is, that they circulate much easier than the wheels of the carriages that they respectively extol to the skies.

A. FRENCHMAN.

List of Steam Coaches and Drags now building and built in London and its Vicinity.

We have been favored with this list by a correspondent, who states that its "accuracy may be depended on." We really had no idea that there were so many locomotive competitors in the field.—[Ed. M. M.]

Hancock	.....	1	Infant, his own, built, experimental one.
Ditto	.....	2	Era, (for a company,) built.
Ditto	.....	3	Enterprise, (ditto,) built.
Ditto	.....	5	a new one now building, his own
Ditto	.....	4	Autopsy, his own, built.
Gurney, Maudsley, and Stone, and Gibbs	.....	1	a drag, built and altered by the said engineers, for Sir C. Dance, Knight.
Ogle	.....	1	a carriage, his own, built, experimental one.
Squire	.....	1	a carriage, himself and others, experimental one.
Frazer	.....	1	a carriage, himself and others, building, experimental one.
Gibbs & Applegath	.....	1	a drag, themselves, experimental one, built.
Gatfield and Bower	.....	1	a drag, themselves, experimental one, building.
Andrew Smith	.....	1	a drag, (for Mr. King,) experimental one, building.
Palmer	.....	1	a drag, his own, experimental one, built.
Redmund	.....	1	a carriage, experimental one, building.
Manting, Joseph	.....	1	a carriage, his own, experimental one, building.
Phillips & Co.	.....	1	a carriage, their own, experimental one, building.
Silk	.....	1	a carriage, his own, experimental one, building.
Smith and Co.	.....	1	a carriage, (for a company,) experimental one, building.
Mile-end (name not known)	.....	1	a carriage, (for a company,) experimental one, building.

STEAM TRAVELLING.—A company has been just established to run steam-coaches in various parts of England. The capital of the company is to be £350,000. They have ordered fifty coaches to be built at Birmingham and six at Maudsley's. Sir H. Parnell is the chairman of the company.

Report of the Board of Directors of the Pontchartrain Railroad Company, to the Stockholders, at their meeting of December 2, 1833.

Office of Pontchartrain Railroad Co. }
New-Orleans, Dec. 2, 1833. }

TO THE STOCKHOLDERS:

I am instructed by the board of directors to lay before you the following statements:

1. Statement of the affairs of the company on the 30th of November ult.

2. Comparative statements of receipts for 1831, '32, and '33.

3. Statement of the machinery ordered, and of the work required for the completion of the road, and their probable cost.

By statement No. 1, it will be seen that the rail track, harbor, machinery, real estate, negroes, &c. &c., have cost \$443,433 76

To which may be added the additional amount required for machinery, and the completion of the road, say - - - 18,600 00

Making the total cost of the road, independent of current expenses \$462,033 76

The same statement shows the debts of the company are as follows:

Bills payable, due in 1834 - - \$37,419 36

" " " 1835 - - 5,085 00

Due to sundries - - - 8,000 00

Bonds in favor of the City Bank, payable in 1837, '42, and '47 - - 50,000 00

\$100,504 36

Their available means are as follows:

Bills receivable, due in 1834, '35, '36, and '37 - - - \$19,826 14

Amount due by sundries - - - 5,257 01

Cash on hand - - - 3,627 77

Sinking fund to meet the reimbursement of bonds - - - 3,484 00

\$32,194 92

Amount due on the Darcantel property, and in suit, about \$40,000 00

The second statement shows that the receipts of the company, since the commencement of their operations, have been as follows:

For 1831 - - - \$16,141 01

" 1832 - - - 44,101 15

" 1833 - - - 75,929 25

The third statement enumerates the machinery ordered, and the works required for the completion of the road and harbor, and their probable cost.

SUMMARY.

Capital stock of the company - \$250,000 00

Cost of works, including probable amount required for their completion, &c. as per statement \$462,033 76

DEBTS OF THE COMPANY FOR 1834.

Amount due as above - - \$37,419 36

Probable cost of the machinery ordered, and works required for the completion of the road - - 18,600 00

Probable current expenses, - - 30,000 00

Interest on bonds - - - 4,000 00

Due to sundries - - - 8,000 00

\$98,019 36

AVAILABLES FOR 1834.

Bills receivable - - - \$3,077 53

Cash - - - 3,627 77

Return duties on rails, when laid - 2,000 00

Rent of hotels and bath houses - - 4,200 00

Due by sundries - - - 5,257 01

Probable receipts; suppose the same amount as in 1833 - - 75,929 25

\$94,091 56

It is confidently expected that the balance of bills receivable, and the amount due on the Darcantel property, will more than suffice to

redeem the bonds issued in favor of the City Bank.

It may be well to observe here, that the real property of the company is put down at cost, while it is worth more than double the amount.

The cholera and yellow fever, during the last summer, have certainly reduced the receipts of the company upwards of twenty thousand dollars; it is, therefore, not unreasonable to suppose, that the increase in the receipts for 1834 will be at least in the same ratio as the previous years, when the track and harbor were in an unfinished state, and the whole works covered with mechanics and laborers. Should this be the case, the company will be enabled to complete their works, extinguish their debts, and give a good dividend at the close of the coming year.

During the present year the following works have been completed, to wit:

1. The harbor, with the exception of a small part of the breakwater.

2. A large car house.

3. An engine house.

4. Double and treble tracks at both ends of the road, to facilitate the arrival and departure of the cars.

5. A large platform to avoid manual labor in loading the cars at the city end of the track.

6. Ten new cars for passengers.

7. The Venetian blinds of the Washington Hotel.

8. Filled up a large extent of the company's property, thereby trebling its value.

9. A bath house for the people of color.

And the company have bought or imported the following machinery:

1. The locomotive engine Creole, and a large number of freight cars.

2. A lathe, and the necessary tools for the engines and forge.

3. A drudging machine.

The drudging machine has the double advantage of preserving a proper depth of water in the harbor, and of supplying the company with materials to fill up their lots, thereby greatly increasing the value and utility of both; about fourteen thousand superficial feet have already been filled up.

The company is now amply supplied with all the machinery required for the transportation of freight and passengers. A third locomotive engine has been ordered, to prevent the possibility of a stoppage; and the forge is provided with lathes and the necessary tools to keep the machinery in proper order, and to repair any part of the engines which may give way.

A few months will now suffice for the completion of the whole works; the board of directors will then be enabled to direct their undivided attention to the proper application of the immense mechanical power under their control. I am, very respectfully, your obedient servant,
JOHN HEWLETT, President.

UNDULATING RAILWAYS have attracted much attention and discussion in England. The inventor, Mr. Badnall, has met with great opposition from various sources; he has, however, steadily pursued his labors in perfecting his invention, and at the same time kept up a controversy, always in a gentlemanly, yet decided tone, with his opponents, until he has demonstrated, by actual and repeated experiments, its entire practicability. So well, indeed, has he satisfied those who have witnessed his experiments, that Mr. Stephenson, the distinguished engineer of the Liverpool and Manchester Railroad, has joined him as a partner in civil engineering.

In Nos. 48 and 50 of Vol. 2, we gave, from a London paper, some account of experiments made on the Liverpool and Manchester Railway

by Mr. Badnall, to test the correctness of the undulating principle as contended for by him. They were not, however, given at length in the London paper, and therefore we re-publish them from the London Mechanics' Magazine, as given by Mr. Badnall himself, and we shall publish several articles from the Mechanics' Magazine, to explain more fully Mr. Badnall's views and theory, that the subject may receive in this country the consideration which its importance demands.

Further Experiments on the Liverpool and Manchester Railway, to determine the correctness of the Undulating Railway System.

SIR,—Since I had last the pleasure of addressing you, we have been enabled to try some further experiments on the Liverpool and Manchester railway, the decisive result of which will, I doubt not, fully establish, in your mind and in the public opinion, the merits of the undulating principle.

On Wednesday last, the 16th instant, we met as before on the Sutton inclined plane. On this occasion it was agreed by the engineers present, viz., Mr. Robert Stephenson, sen., the Messrs. Dixons, Mr. Dagleish, and myself, that the truth and validity of the principle, as well as the comparative advantage to be derived from its adoption, would be effectually determined by the following test:

As great a velocity as possible being attained by the engine and load, before reaching a given point near the foot of the inclined plane, the time was to be accurately ascertained which the train occupied in ascending from that point to a state of rest.

The power being thus reversed, the time was to be accurately measured which the train occupied in descending from a state of rest to the point from which it had previously ascended.

Hence it would be obvious, that if the descent were made in less time than the ascent, the velocity generated at the foot of the plane would be proportionably greater than the velocity of the ascending train at the same point, and, consequently, the demonstration would be clear that the engine and train would not only have ascended to an opposite elevation equal to that from whence it fell, but to a greater one, the extent of which would be in proportion to the velocity attained.

Experiment 1.—The "Liver" engine, and a load of thirteen waggons (weighing in all 72½ tons,) after traversing a distance of three-fourths of a mile to acquire a sufficient velocity, ascended the inclined plane 278 yards, the time occupied in performing the ascent to a state of rest being 90 seconds, viz. velocity at foot of plane being about 12.60 miles per hour, and the average velocity about 6.30 miles per hour.

Experiment 2.—The power being reversed the engine and train descended 278 yards, viz. from a state of rest to the point from which they had previously risen, in 50 seconds. The velocity at the foot of the plane being about 23.70 miles per hour—average velocity about 11.35 miles.

Experiment 3.—The engine and train having traversed ¾ mile to generate velocity, ascended to a state of rest, viz. about 278 yards in 75 seconds. Velocity at the foot of the plane being about 14.12 miles per hour—average velocity about 7.6 miles.

Experiment 4.—The power being reversed, the descent of 278 yards was accomplished in 40 seconds. Velocity at the foot of the plane being about 28.32 miles per hour—average velocity 14.16 miles.

Experiment 5.—The ascent of 278 yards was made in 80 seconds. Velocity at the foot of the plane being about 14.22 miles per hour—average velocity 7.11 miles per hour.

Experiment 6.—The descent of 278 yards was accomplished in 49 seconds. Velocity at the foot of the plane being about 23.22 miles per hour—average velocity about 11.61 miles per hour.

AVERAGE.		
Total spaces passed over to generate maximum velocity before ascending.	Times occupied in ascending 278 yards.	
Experiment 1.....1,320 yards.....	90 seconds.	
Experiment 3.....1,320 yards.....	75 seconds.	
Experiment 5.....1,320 yards.....	80 seconds.	
Total, 13,960 yards.....	245 seconds.	
Average, 1,320 yards.....	81 1/2 seconds.	
Total spaces passed over in generating maximum velocity in descending.	Times occupied in descending 278 yards.	
Experiment 2.....278 yards.....	50 seconds.	
Experiment 4.....278 yards.....	40 seconds.	
Experiment 6.....278 yards.....	49 seconds.	
834 yards.....	139 seconds.	
278 yards.....	46 1/2 seconds.	

From the preceding statement it appears, that the utmost average maximum velocity which the Liver engine could attain on this occasion, at the foot of the plane, after traversing a distance of 1,320 yards, was about 13.926 miles an hour; by which means, the power being continued, she was enabled to ascend an inclination of 278 yards.

On the other hand, it appears that the same engine, with the same load, (the steam being kept up in every instance to a pressure of about 50 lbs. to the inch,) generated a velocity, after descending 278 yards, of about 24.488* miles per hour, evidently proving that the engine and train would not only have mounted another summit of equal elevation to that from whence it fell, but would, at the highest point, have been travelling at a velocity of more than ten miles an hour, with the full means of increasing that velocity to any desired extent over the succeeding undulations.

Although the preceding experiments had, to the satisfaction of all present, decided the superiority of the undulating principle, I was anxious to know the result of a trial with a double load. I therefore proposed (it being too late an hour on this occasion) to attain, on a future day, a velocity of twenty miles an hour, with a double train of goods and two engines. I had, on several occasions, published my opinion of what that result would be, and I have now the satisfaction of adding the particulars of this important experiment, which, I need not say, more than confirms all my anticipations.

On Sunday morning last two locomotive engines, viz. the "Firefly" and the "Pluto," left Manchester with a train of loaded waggons, weighing 150 tons, exclusive of engines and tenders, the whole length of the train being about 155 yards.

On arriving at the Sutton inclined plane, it was determined to adopt the same method as on the last trials, of proving the merits of the principle. Our reason for appointing Sunday for this meeting will be obvious, when it is considered how dangerous and inconvenient it would be to try experiments with such a load on any other day, when the trains are almost constantly passing and repassing.

It may be known to some of your readers, that the French government have lately appointed a certain number of their most eminent engineers to visit this country, with a view of acquiring all requisite information, preparatory to the construction of several intended French lines of railway.

These gentlemen, nine in number, were present on this occasion; their names were as follows: Mons. Navier; Mons. Goubeau, Juge-mont des Ponts et Chaussées; M. Arnollet, Ingenieur en chef du Ponts et Chaussées, a Dijon; M. Eugene Nuneann, Ingenieur des Ponts et Chaussées, No. 1 Rue Castiglione, Paris; Mons. Dausse; Mons. L. L. Vallee, Ingenieur en chef des Ponts et Chaussées; Mons. J. Moistard, In-

The velocity in these instances is calculated from the average number of seconds occupied in ascending and descending; thus, 278 yards being = about 6 1/2 of a mile, we have the descending line 46 1/2 x 6 1/2 = 294 and 3,600 seconds ÷ 294 x 2 = 24.488 maximum velocity.

genieur de la Marine; Mons. Paris, Lieutenant de Vaisseau; Mons. K. Mangan.

The English engineers present were Mr. R. Stephenson, sen., of Manchester, (with whom I have recently entered into partnership as civil engineers,) Mr. Dagleish, sen., Mr. Dixon, sen., Mr. Dagleish, jun., and myself. In addition to whom were many other individuals deeply interested in railways, and of general scientific acquirements, among whom were Mr. Case, of Summer-hill, near Liverpool, Mr. Garnett, of Manchester (editor of the *Guardian*), and others.

The following statement cannot fail to form an interesting part of your publication:

Experiment 1.—Two locomotive engines, the Firefly and the Pluto, being attached to the train above mentioned, and having traversed a distance of one mile, to generate a sufficient velocity, arrived at the point from whence the ascent was to be measured, at a velocity of about 20.28 miles per hour. The Pluto then left the train, and the Firefly alone ascended with the load (working the whole way) to a distance of 575 yards, 116 seconds—average velocity being about 10.14 miles an hour.

Experiment 2.—The power of the Firefly being reversed, the engine and load descended 575 yards in 74 seconds. The velocity at the foot of the plane being about 31.70 miles per hour—average velocity about 15.85 miles per hour.

Experiment 3.—The Firefly and Pluto having traversed the same distance as before, generated, at the foot of the plane, a velocity of about 14.34 miles per hour. The Pluto then left the train, and the Firefly and load ascended (power working) 315 yards in 90 seconds—average velocity about 7.17 miles per hour.

Experiment 4.—The power of the Firefly being reversed, the whole train descended 315 yards in 65 seconds. Maximum velocity 19.82—average velocity 9.91.

Experiment 5.—The same engines and load, working about 1 1/4 miles to generate velocity, attained at the foot of the plane a velocity of about 18.32 miles an hour. The Pluto left as before, and the Firefly and load rose 457 1/2 yards in 102 1/2 seconds—average velocity about 9.16 miles per hour.

Experiment 6.—The Firefly and train descended 457 1/2 yards in 80 seconds. Maximum velocity 23.22 miles per hour—average velocity 11.61. N.B. In this instance some delay occurred in reversing the power, which will account for the comparative difference in time.

Throughout the whole of these experiments it will be seen the results were so much in favor of the undulating system, that it was evident a far greater load than 150 tons could be moved by the Firefly, at an average velocity of 15 miles per hour from one summit of a curve to another. The dip of inclination being about 1 in 99, and the total length of the undulation varying from 630 to 1,150 yards.

This led me to propose a further experiment, and I think I may safely add, that one more important in result was never before tried in any country.

Experiment 7.—The two engines, as before, attained at the foot of ascent a velocity of about 19.04 miles per hour. The Pluto then left the train, and, at the same moment, the Firefly shut off her steam. The whole train then rose by momentum alone (the weight of the train, including engine and tender, being near 164 tons,) to the distance of 323 yards in 70 seconds—average velocity about 9.52 miles per hour.

Experiment 8 and last.—The Firefly and train descended 323 yards (power working) in 66 seconds! Velocity at foot of the plane being about 20.04 miles per hour—average velocity about 10.02 miles per hour.

Thus the preceding experiments most unquestionably prove two most important facts—not only that a given locomotive power can convey from one summit of a curve or undulation, to another summit of equal altitude, double the load which that same power can convey at

the same velocity on the level; but that a given locomotive engine can convey, from one summit of a curve or undulation to another summit of equal altitude, double the load which it is capable of moving on a level at a like velocity (see last experiment), by the employment of the steam force throughout only half the distance!

These results lead me to go one step farther. It is my opinion, that if such a weight were to be added to the 150 tons moved on this occasion, as would be a maximum load for three locomotive engines on a level at 15 miles an hour, the Firefly alone (her power being equal to either of the other engines) would move the whole train from one summit of a curve to another of like altitude, at an equal average velocity, viz. 15 miles per hour.

If any of your readers, whether witnesses or otherwise of these interesting experiments, can correct any error of opinion or of statement in allusion to them, I shall be exceedingly happy to recognize and acknowledge it. In the mean time I think, Sir, I may congratulate myself upon having stamped, by this letter, a value that will be long appreciated on the correspondence (*pro and con*) which your Magazine contains on this subject; and I am as happy in feeling that every individual who witnessed the recent experiments was fully satisfied with the importance of the results, as in believing that, in defiance of prejudice and long-formed erroneous opinions on this subject, the public will before long acknowledge, appreciate, and be benefitted by the "UNDULATING PRINCIPLE."

I am, sir, with great respect, your very obedient servant,

RICHARD BADNALL.

P. S.—I have not yet seen your last Number. "S. Y.'s" remarks in the previous one shall be noticed. In the mean time, he does me injustice in supposing I have ever indulged one contemptuous feeling toward him. I could not indulge it to a worm—much more to an individual whose good motives, in a scientific discussion, I have never questioned, and in answer to whose remarks I have bestowed time, attention, and labor.

The following communication, from Mr. J. L. Sullivan, refers to a subject of great importance to this country, and especially to this city. We have heard much of Mr. Blanchard's steamboat for ascending rapids in rivers, without ever having seen a description of it. The following communication will, we hope, attract the attention of those who are experienced in such matters, and have leisure to furnish us with their views for publication.

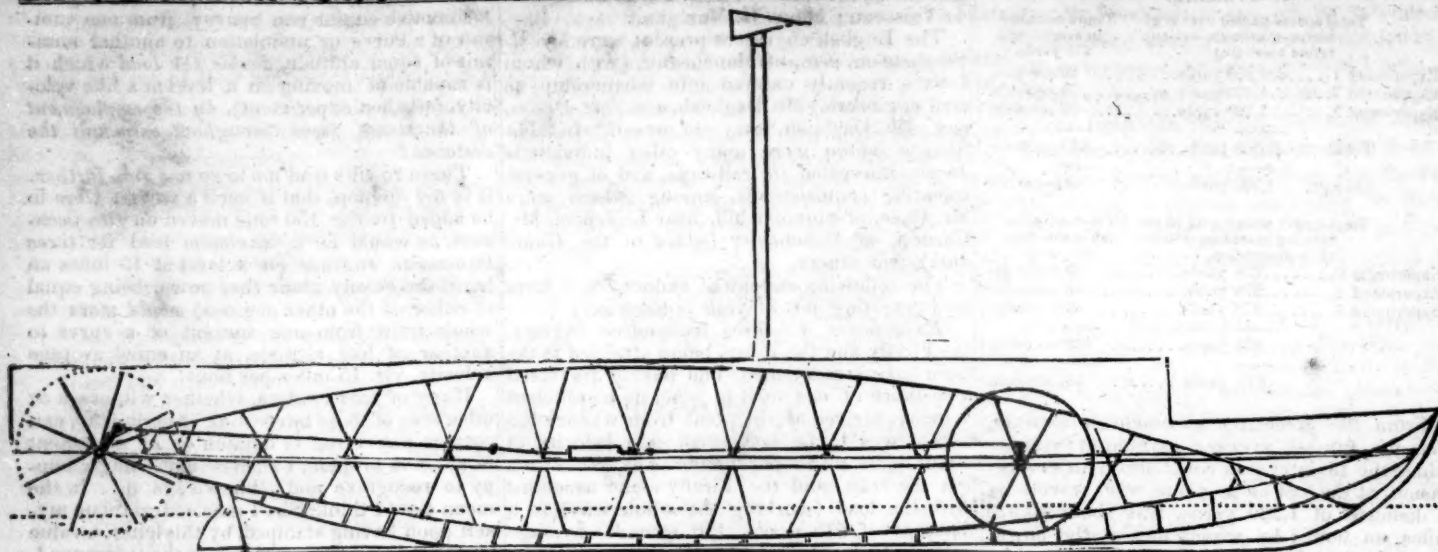
Blanchard's Allegany River Steamboat. [Communicated for the American Railroad Journal.]

To the Editor:

Sir,—If, in announcing the twin boat on Burden's plan, it could have been stated that it had run up rapids so heavy in descent that a canal had been actually made around them where the fall is in fact eight feet a mile, it would have been admitted that "a New Era" in steam navigation had indeed commenced; and this is but a correct description of the performance of *Blanchard's boat* on the Connecticut, between Hartford and Springfield, passing up Enfield falls, daily, the summer past.

This sort of steamboat is the same that has made a passage up to Olean Point from Pittsburgh. Others have since been built for constant business elsewhere; the Allegany route not yet being reached from New-York by the westward bound freight.

But I am led at this time to bring it into recollection and notice, as an interested party, from seeing, in one of your last numbers, mention of an improvement by Mr. Langdon, of Troy, in which some reliance appears to be placed on the principle of strength combined in Blanchard's patent; and more especially also, from seeing the purpose of Pennsylvania, avow-



ed by one of her Senators in Congress, to cut off all our western trade. There can be no question that such is the intention of Philadelphia, and there is much reason to fear that they are much nearer to effecting it than we are in New-York aware of.

The navigation of the Allegany with light and powerful steamboats, together with an immediate connection of this river by a railroad with the Erie canal at Buffalo, could prevent it; and more effectually when the great railroad in contemplation from this city to the lake, touching the head of that river at Hamilton, shall be made; and then the branch to Buffalo, (50 miles,) would serve both to connect the canal with the river, and to connect that city with New-York by a good winter route.

I am not, however, the only interested party; all who wish New-York to retain a good share of the western trade must feel interested in the subject.

Having been on the Allegany while a member of the United States Board of Engineers for Internal Improvement, and having been early in life practically engaged in improving river navigation, I then considered this route as of very great consequence to the commerce of New-York, and very easily made navigable for steamboats of a light draft of water; and when Blanchard's experiment thereon was announced, a few years later, sought and contracted for his services and the right of his invention exclusively for the companies I might form for its use; for others as well as for the Hudson and for the Delaware and Raritan canal trade, as permitting of an extensive communication with the southern waters—for if a short canal were made in North Carolina from Cape Fear river to the Waccamaw in South Carolina, and from Winyaw Bay to the Santee, and a marsh cut made around Bull's Bay, there would be steam navigation inland from New-York to Georgia.

The peculiarity of Blanchard's boat, which assures to it great speed, is the combination of means to construct a very light hull, having extraordinary vertical strength, so as to be able to carry a stern wheel, and *much more than usual power in proportion to size*. It may be said to combine ship carpentry and house carpentry with the principle of the arched bridge. This mode of construction, it will be seen by the prefixed sketch, distributes the stress over the whole fabric. A great vertical force may bear on the arc frames; and if much longitudinal impulse is received, it is at their extremities. Even the cylinders of the engine are borne by these *arc frames*; and the *action and reaction* of the power is *all included within them*. The shell of the hull buoys up or carries the machinery, without being relied on to bear any strain.

Suppose two arcs of a circle of which the

cord is rather longer than the length of the boat. Suppose them vertical and opposed, united at the extremities, and the curve preserved by braces in the form of an X; and that close to each brace a screw bolt ties the two arcs together, pressing on the ends of the braces, somewhat let in. Such a frame placed vertically would be immensely strong to resist perpendicular pressure. Two such frames, thus placed parallel to each other, resting on the floor timbers, and connected with the beams and ribs, makes a very stiff yet very light vessel; and the timber employed being acted on lengthwise, may be very small, yet abundantly strong in that position.

The frames or arcs project astern far enough to bear the wheel, the weight of which is sustained, consequently, by the whole of the hull, even to the head; and thus the wheel may be placed so as to act in the dead water of the wake, producing there much more effect than close up. The cylinders are horizontal, and connected with the arcs, which bear their weight and action. The boilers also are placed so as to be borne by the arcs; and if the boat is for canal use, they are in-board in rooms separated by a very strong *glancing shield*, to guard against explosions, though otherwise effectually guarded against. If for rivers, they are placed on the guards, and outside of the shields. On rivers there may also be *side wheels*: and for rapids, where the current is too swift, Blanchard's invention to push or set the boat forward is applied. This is powerful enough even to lift while it pushes ahead, and is a combination very useful on the Ohio in a low state of the water.

This branch of navigation is becoming too extensive and valuable in our country not to have made safety a very important point. Besides the shield to glance off an explosion, the use of a float, with mechanism to ring a bell in the boiler itself, when the water gets too low, is another precaution: another, to cause similar machinery to open valves to give notice by steam: another, a self-regulator of the supply: another, to prevent sediment and concretions on the bottom, (of which I shall give you a description in a future article.) We have, besides, several improvements in the boiler to use anthracite, reducing the quantity so as to make it about one-third the expense of pine wood; so also as to apply the fire without internal flues.

The Allegany boats can use the coal of the upper branches of this river, as well as that obtained at Pittsburg. A branch railroad to Buffalo would carry coal to the lake boats. A twin boat would not be so safe for the Allegany as a single one. The liability of a twin boat to strike aground, or against another vessel or obstacle, suddenly with one of the hulls, causes the momentum of the other (a force equal to

the weight thereof multiplied into its velocity) to rend itself separate. And two hulls that are so heavy as to sink, if filled, doubles the danger, because the sinking of one upsets the whole. Whatever depresses one more than the other, disturbs the steering; but a single hull may heel without diminishing the power of the helm.

It seems reasonable to think that a single hull, with very ample power, will be the swiftest vessel, because she may receive the form and proportions nearly which Nature gives to quick swimming fish. Naval architecture has taken this hint, and follows it out as far as is consistent with the stability of sailing vessels. One that is shaped the same at both ends, cannot sail as well as when gradually diminishing aft from the forward *third*. Since the resistance to the velocity is well known to increase in much higher ratio than the speed, the lighter the draft the greater promise of rapidity, as flat vessels sail fastest before the wind.

On a large scale, Blanchard's boat may have uncommon breadth and adaptation to the Ohio; and on the Hudson she may have both stern and side wheels. The more breadth of paddle applied, the less depth will be required, and the more advantageous the application. The cylinders may be upright for the side wheels, and horizontal for the stern wheel; all sustained by the arcs: and by thus distributing or dividing the power, more may be employed. The weight of an engine increases in a greater ratio than the power, therefore three engines would comprehend a greater proportion of power to weight, than one or two.

The resistance sustained by a body moving in a fluid, is proportioned to the square of its velocity, and the area of its section immersed. Whatever the shape of the vessel, her displacement of water must be a quantity equal to her weight. In point of draft, or section immersed, nothing is gained by a twin boat; but in point of resistance, something is lost. In his work on the Steam Engine, Mr. Renwick observes that "an obvious advantage will be gained by increasing the size of the vessels, for the resistances vary as the *square* of similar dimensions, while the *tonnage* increases with their cubes."

It is evident that a boat upon Blanchard's plan, as broad and long as Burden's, and 32 feet wide, would draw but half as much water, and present no more cross section; and while the resistance would be the same, minus the friction of two sides, she would have the advantages of not parting the water at so much depth, and of avoiding by her shape the retarding force following or occurring at the stern. Burden's are 8 feet diameter.

For these reasons mainly, which are in their nature, indisputable, I am led to think that Blanchard's kind of boat with stern and

side wheels must be very favorable to the effect of the power, since with that of the stern wheel only, they perform so well.

In reference to the commerce of the west, this steam-boat evidently possesses the properties demanded by the rapidity of some parts of the Alleghany, and the shallowness of some parts of the Ohio in the summer season. It is of great consequence, indeed, that as the New-Orleans market is not much sought from the north at mid-summer, the western trade on the Ohio, the Cumberland and the Tennessee, and even the Missouri, may advantageously rely on a direct and cheap way to a northern port.

This route is the more important, since the avowed intention of Pennsylvania, because the hope cherished by some that a canal might be made or allowed by that state along the shore of the Alleghany, cannot be expected, *contrary to the interest of Philadelphia.*

But it may be said here, as it has been said there, in the Quarterly Review, that the railroad from New-York to Alleghany river, "will become a permanent portion of national wealth, and not only add to the comfort and riches of the present generation, but exert an influence upon the remotest posterity. Of all the sources of national wealth, internal commerce is not only the most secure, but the most productive. Nations that are merely agricultural are proverbially poor. It is far otherwise when the enterprise of the industrious is directed to every object."

"All the means which facilitate both personal communication, and a cheap and rapid interchange of commodities, are of the utmost value and importance. They have been so regarded by all enlightened nations; and in truth, the attention that has been paid to them is one of the surest criterions by which to judge of the advance a people has made in civilization. Progress in the Fine Arts is a far less certain indication of refinement than roads and inland navigation."

Such are the opinions entertained in Philadelphia, where practice evinces their acceptance throughout the state.

Permit me now briefly to consider the practical effect of this navigation of the Alleghany combined with the use of the railroad from hence thither, in its way to lake Erie, compared with the useful effect of the railroad without these steamboats.

The lake being closed in the spring, nearly as late at Dunkirk, where the road will terminate, as at Buffalo, about two months more of lake navigation will belong to the communication through Pennsylvania; but as the Alleghany and the Ohio are open earlier than the Pennsylvania canal can be, unless a very mild winter, much freight that would have gone by the way of Philadelphia to the central west, or to the centre of Ohio by the lake, will descend the Alleghany and pass from Cincinnati north, in less time, and probably at less expense. The consequence will be that New-York retains her full share of the western commerce rather more advantageously than Pennsylvania can by her canal, though in a milder region.

Let us consider the distances and time, which I do with the more confidence from knowing the ground by observation.

It is most probable that this route will avail of the Harlem railroad as far as opposite Rockland, gaining the shore of Hudson by following that of Harlem river, and crossing, pass thence to Ramapo valley, (unless the Company should avail of the Paterson railroad to reach the same point, the ground being favorable; this, however, is leaving the state.)

To Ramapo may be called - - 35 miles.

Thence to Florida, in Orange, - 24 "

Thence by Deer Park Gap, in Shawangunk mountains, and across Sullivan county, to the Delaware, - 60 "

Up the Delaware - - - 20 "

Across to the Susquehanna - - 16 "

Westward down along the Susquehanna, and up along the Chesapeake, - - - - 110 "

Canestoe to Angelica - - - 20 "

To Olean - - - - 30 "

- - - - 315 "

Thence by the Alleghany to Pittsburgh, - - - - 280, "

descending 2½ feet in a mile, in all 630 feet.

The time, at 8 miles an hour on the railroad, will be - - - - 40 hours.

Down the river - - - - 20 "

To Cincinnati, 439 miles, at 12 miles an hour - - - - 37 "

- - - - 97 "

In the spring of the year, when the water is high, the passage down must be even quicker, and the merchants are then solicitous to reach home early with their purchases.

In the autumn, after the 1st October, the Alleghany will be deemed safer than the lake, and the river will be open later than the canal. There will be two months earlier access to the New-York market for produce from the west this way than by the lake.

It will be important that the boats be powerful. The speed of steam freighting, even on the Hudson, makes up for the cheapness and slowness of sloop navigation, which averages four days, while the tow-boats run the passage regularly in 24 hours. The navigation of the Alleghany will be at least half as important to the state as the Hudson itself.

But no time is to be lost in defensive measures against the vigorous enterprise of Philadelphia. She will, if we delay, have accomplished her works, completed her system of interception, and bound the West to her capital in fetters of credit. The wishes even of the western people of that state will be frustrated. The expedient that will take least time, is to connect Erie canal at Buffalo with the bend of the Alleghany in Cattaraugus, as our leading statesmen think. The distance is 50 miles, and one track might be soon made. But to wait for a canal to be made from Rochester to Olean, however useful the work, involves too much delay as a defensive measure.

This railroad might be considered a branch of the main line in reference to the winter travel, or practically so. To use again the language of the Quarterly Review, "A populous state, willing to pledge its resources for the redemption of loans, can alone command that confidence which will justify investment of the property of individuals, or what is of even more importance, will draw to our country the wealth of foreign capitalists."

This remark is applicable and encouraging to the southern states. Public investment may be compensated in the effects. Erie canal doubled the price of produce in the western counties. When such works are accomplished by public credit, the loans may be paid off by selling stock to private capitalists, who can then buy in, because immediate returns warrant it.

The difference between our country and others, is, that their resources are swallowed up in the necessity of maintaining large standing armies. Our country only wants cheap transportation to be prosperous. It has been well remarked, that "When a state enters into a system of internal improvement, if the completion of the public works shall add to the value of individual property as much as they cost, the state is no loser (if they receive no revenue); but if besides, they pay the interest of the cost, the whole expenditure becomes clear profit."

Humble as may be the instrument described in this article, it can hardly be doubted from experience thus far, that it really commences a "new era" in the art, when steamboats will conquer the difficulties of rapid rivers, and combining the means of safety, traverse the

great arc of the Union, from the head of the Alleghany to the head of the Tennessee. For this reason an Albany company might commence this operation, if the railroad company should not do it in anticipation of the accomplishment of their work. J. L. SULLIVAN.

P. S. There has lately been an improvement in steam boilers, made by Mr. L. Disbrow, and owned by him and Joseph Goddard, Esq., and tested in the steamboat of the Delaware and Hudson Canal Company, by which there is a saving made, compared with wood, of 45 to 50 per cent. in the expense of fuel.

It consists of a number of conical furnaces, the base of which is the grate, the apices connected by a small flue. These all immersed in the water and half full of coal, make a steady and strong fire. They are fed near the top of the cones, by horizontal openings.

On the Preservation of Timber, &c. By A. B. [For the American Railroad Journal.]

Sir,—I will contribute a little of my experience, which satisfies me that the plan of the Black Rock railroad will answer well. In 1823 I laid a hemlock plank on the surface of ground, corresponding with a grade prepared for a railroad. Without grass or vegetation, dirt had accumulated so as to be about even with the upper surface, except at one end, which had become covered with gravel. Last season, after the plank had lain ten years, I had occasion to take it up. I expected to find the under side rotten, but found the whole plank as sound and hard as if it had been under cover. The use of it was to walk upon from the kitchen door. A. B.

RAILWAY BETWEEN AMSTERDAM AND COLOGNE.—The Prussian journals say that an iron railroad will be made between Amsterdam and Cologne, that the work will be confided to Lieut. Col. Bake, of the Dutch engineers, and that a Dutch civil engineer, named Braede, is already engaged in the preparatory surveys. The plan has already received the sanction of the kings of Prussia and the Netherlands.

PERCUSSION LOCKS FOR THE ARMY.—A committee, consisting of three officers of artillery, is now actively engaged at Woolwich in a course of practical experiments, of which the object is to ascertain the propriety, or otherwise, of introducing percussion locks for the army, in lieu of the present flint and steel. No report is, we hear, to be made to government till the firing of 24,000 rounds of cartridges shall have afforded grounds for a decided opinion.

WATER IN FLOUR.—Most important researches have recently been carried on in Paris by MM. Payen and Persoz, on the several points in the chemical history of bread, flour, and grain. Their observations are not yet published in detail; but we select the following as being one of the very highest commercial dietetic importance. They have found that 100 parts of flour, sold as dry, and imparting no moist stain to blotting paper, contain, under atmospheric circumstances, 19 per cent. of water, and but 89 of dry nutritive matter; that flour exposed to moist air contains as much as 23 per cent. of water; that the finest flour employed by the bakers contains 16 per cent. under ordinary circumstances. In summer these proportions are reduced, but they are remarkably increased in moist weather. Thus, the quantity of flour which, by weight, at the rate of 5 per cent. of water, would produce 150 lbs. of bread, will produce but 127½ lbs., when the same weight of flour is purchased in long continued wet weather. The prices of flour should, consequently, in all seasons, be based on the quantity of dry matter it contains, and which a simple and rapidly performed experiment would exactly indicate. Thus, by placing 100 grains of flour on a plate, and heating them on a vessel of boiling water for one hour, the loss sustained will denote the precise quantity of water mixed with the flour.—[Universal Corn Reporter.]



Apparatus contrived by Dr. Hare for separating Carbonic Oxide from Carbonic Acid, by means of Lime Water. [From the Mechanics Magazine.]

Lime water being introduced in sufficient quantity into the inverted bell glass, another smaller bell glass, C, is supported within it, as represented in this figure. Both of the bells have perforated necks. The inverted bell is furnished with a brass cap, having a stuffing-box attached to it, through which the tube D, of copper, slides air-tight. About the lower end of this tube, the neck of the gum elastic bag is tied. The neck of the other bell is furnished with a cap and cock, surmounted by a gallow's screw, by means of which a lead pipe, P P, with brass knob at the end suitably perforated, may be fastened to it, or removed at any moment. Suppose this pipe, by aid of another brass knob at the other extremity, to be attached to the perforated neck of a very tall bell glass filled with water upon a shelf of the pneumatic cistern, on opening a communication between the bells, the water will subside in the tall bell glass, over the cistern, and the air of the bell glass, C, being drawn into it, the lime water will rise into and occupy the whole of the space within the latter. As soon as this is effected, the cocks must be closed, and the tall bell glass replaced by a small one filled with water, and furnished with a gallow's screw and cock. This bell being attached to the knob of the lead pipe, to which the tall bell had been fastened before, the apparatus is ready for use. I have employed it in the new process

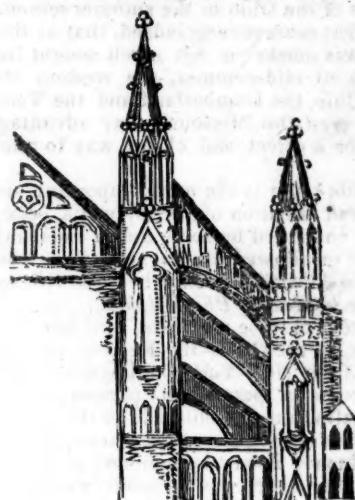
for obtaining carbonic oxide from oxalic acid, by distillation with sulphuric acid in a glass retort. The gaseous product consists of equal volumes of carbonic oxide and carbonic acid, which being received in a bell glass, communicating as above described by a pipe with the bell glass C, may be transferred into the latter, through the pipe, by opening the cocks. As the gaseous mixture enters the bell C, the lime water subsides. As soon as a sufficient quantity of the gas has entered, the gaseous mixture may, by means of the gum elastic bag and the hand, be subjected to repeated jets of lime water, and thus depurated of all the carbonic acid. By raising the water in the outer bell, A, the purified carbonic oxide may be propelled, through the cock and lead pipe, into any vessel to which it may be desirable to have it transferred.

GALWAY.—The population is, we believe, above 40,000; of these a lamentable number is in a state of pauperism. The annals of Galway are carefully preserved from the year 1280, and afford most interesting details. It was once a great depot for Spanish wines.

The Galway females of the peasant class are fond of red petticoats and flannel or frieze jackets. The Wexford ones of blue striped linsey. But there is another much more distinguishing and important mark between them. In Galway, the Irish language is in very general use; so much so that, in many districts, English is hardly understood. In Wexford, Irish is totally unknown.—[Quarterly Journal.]

Animal Mechanics, or Proofs of Design in the Animal Frame. Continued from page 72. [From the Library of Useful Knowledge.]

Fig. 5.



By all this, we see, that if the skull is to be considered as an arch, and the parietal bones as forming that arch, they must be secured at the temporal and sphenoid* bones, the points from which they spring. And, in point of fact, where is it that the skull yields when a man falls, so as to strike the top of his head upon the ground?—in the temples. And yet the joinings are so secure, that the extremity of the bone does not start from its connections. It must be fractured before it is spurred out, and in that case only does the upper part of the arch yield.

But the best illustration of the form of the head is the dome.

A dome is a vault rising from a circular or elliptical base; and the human skull is, in fact, an elliptical surmounted dome, which latter term means that the dome is higher than the radius of its base. Taking this matter historically, we should presume that the dome was the most difficult piece of architecture, since the first dome erected appears to have been at Rome, in the reign of Augustus—the Pantheon—which is still entire. The dome of St. Sophia, in Constantinople, built in the time of the emperor Justinian, fell three times during its erection; and the dome of the cathedral of Florence stood unfinished 120 years for want of an architect. Yet we may, in one sense, say that every builder who tried it, as well as every laborer employed, had the most perfect model in his own head. It is obvious enough, that the weight of the upper part of the dome must disengage the stones from each other which form the lower circle, and tend to break up their joinings, and consequently to press or thrust outwards the circular wall on which it rests. No walls can support the weight, or rather, the lateral thrust, unless each stone of the dome be soldered to another, or the whole hooped together and girded. The dome of St. Paul's has a very strong double iron chain, linked together, at the bottom of the cone; and several other lesser chains between that and the cupola, which may be seen in the section of St. Paul's engraved by Hooker.

* In the Greek, *sphenoid*—in the Latin, *cuneiform*—like a wedge, because it is wedged among the other bones of the head; but these processes, called wedges, are more like dovetails, which enter into the irregularities of the bones, and hold them locked.

The bones of the head are securely bound together, so that the anatomist finds, when every thing is gone, save the bone itself, and there is neither muscle, ligament, nor membrane of any kind to connect the bones, they are still securely joined, and it requires his art to burst them asunder; and for this purpose he must employ a force which shall produce a uniform pressure from the centre outwards; and all the sutures must receive the pressure at one time, and equally, or they will not give way. And now is the time to observe another circumstance, which calls for our admiration. So little of accident is there in the joining of the bones, that the edge of a bone at the suture lies over the adjoining bones at one part, and under it at another, which, with the dovetailing of the suture, as before described, holds each bone in its place firmly attached; and it is this which gives security to the dome of the cranium.

If we look at the skull in front, we may consider the orbits of the eye as crypts under the greater building. And these under arches are groined, that is to say, there are strong arched spines of bone, which give strength sufficient to permit the interstices of the groinings, if I may so term them, to be very thin. Betwixt the eye and the brain, the bone is as thin as parchment; but if the anterior part of the skull had to rest on this, the foundation would be insufficient. This is the purpose of the strong ridge of bone which runs up like a buttress from the temple to the lateral part of the frontal bone, whilst the arch forming the upper part of the orbit is very strong; and these ridges of bone, when the skull is formed with what we call a due regard to security, give an extension to the forehead.*

In concluding this survey of the architecture of the head, let us suppose it so expanded that we could look upon it from within. In looking up to the vault we should at once perceive the application of the *groin* in masonry; for the groin is that projection in the vault which results from the intersection of two arches running in different directions. One rib or groin extends from the centre of the frontal bone to the most projecting part of the occipital foramen, or opening on the back of the head; the other rib crosses it from side to side of the occipital bone. The point of intersection of these two groins is the thickest and strongest part of the skull, and it is the most exposed, since it is the part of the head which would strike upon the ground when a man falls backwards.

What is termed the base of the skull is strengthened, if we may so express it, on the same principle: it is like a cylinder groin, where the rib of an arch does not terminate upon a buttress or pilaster, but is continued round in the completion of the circle. The base of the skull is irregular, and in many places thin and weak, but these arched spines or ribs give it strength to bear those shocks to which it is of course liable at the joining of the skull with the spine.

CHAPTER II.

MECHANISM OF THE SPINE.—The brain case is thus a perfect whole, secure on all sides, and strengthened where the exposure to injury is the greatest. We shall see, in the column which sustains it, equal provi-

sion for the security of the brain; and what is most admirable, there is an entirely different principle introduced here; for whereas, in the head, the whole aim is firmness in the joinings of the bones, in the spine which supports the head the object to be attained is mobility or pliancy. In the head, each bone is firmly secured to another; in the spine, the bones are not permitted to touch; there is interposed a soft and elastic material, which takes off the jar that would result from the contact of the bones. We shall consider this subject a little more in detail.

The spinal column, as it is called, serves three purposes: it is the great bond of union betwixt all the parts of the skeleton; it forms a tube for the lodgment of the spinal marrow, a part of the nervous system as important to life as the brain itself; and lastly, it is a column to sustain the head.

We now see the importance of the spine, and we shall next explain how the various offices are provided for.

If the protection of the spinal marrow had been the only object of this structure, it is natural to infer that it would have been a strong and unyielding tube of bone; but as it must yield to the inflexions of the body, it cannot be constituted in so strict an analogy with the skull. It must, therefore, bend; but it must have no abrupt or considerable bending at one part, for the spinal marrow within would in this way suffer.

By this consideration we perceive why there are twenty-four bones in the spine, each bending a little; each articulated or making a joint with its fellow; all yielding in a slight degree, and, consequently, permitting in the whole spine that flexibility necessary to the motions of the body. It is next to be observed, that whilst the spine by this provision moves in every direction, it gains a property which it belongs more to our present purpose to understand. The bones of the spine are called *vertebræ*; at each interstice between these bones, there is a peculiar grisly substance, which is squeezed out from betwixt the bones, and, therefore, permits them to approach and play a little in the motions of the body. This grisly substance is inclosed in an elastic binding, or membrane of great strength, which passes from the edge or border of one vertebra to the border of the one next it. When a weight is upon the body, the soft gristle is pressed out, and the membrane yields: the moment the weight is removed, the membranes recoil by their elasticity, the gristle is pressed into its place, and the bones resume their position.

We can readily understand how great the influence of these twenty-four joinings must be in giving elasticity to the whole column; and how much this must tend to the protection of the brain. Were it not for this interposition of elastic material, every motion of the body would produce a jar to the delicate texture of the brain, and we should suffer almost as much in alighting on our feet as in falling on our head. It is, as we have already remarked, necessary to interpose thin plates of lead or slate between the different pieces of a column, to prevent the edges (technically called *arises*) of the cylinders from coming in contact, as they would in that case chip or split off.

But there is another very curious provision for the protection of the brain: we mean the curved form of the spine. If a steel spring, perfectly straight, be pressed

betwixt the hands from its extremities, it will resist, notwithstanding its elasticity, and when it does give way, it will be with a jerk.

Such would be the effect on the spine if it stood upright, one bone perpendicular to another; for then the weight would bear equally; the spine would yield neither to one side nor to the other, and consequently there would be a resistance from the pressure on all sides being balanced. We, therefore, see the great advantage resulting from the human spine being in the form of an italic *f*. It is prepared to yield in the direction of its curves; the pressure is of necessity more upon one side of the column than on the other; and its elasticity is immediately in operation without a jerk. It yields, recoils, and so forms the most perfect spring; admirably calculated to carry the head without jar or injury of any kind.

The most unhappy illustration of all this is the condition of old age. The tables of the skull are then consolidated, and the spine is rigid: if an old man should fall with his head upon the carpet, the blow, which would be of no consequence to the elastic frame of a child, may to him prove fatal; and the rigidity of the spine makes every step which he takes vibrate to the interior of the head, and jar on the brain.

We have hinted at a comparison betwixt the attachment of the spine to the pelvis and the insertion of the mast of a ship into the hull. The mast goes directly through the decks without touching them, and the heel of the mast goes into the step, which is formed of large solid pieces of oak timber laid across the keelson. The keelson is an inner keel, resting upon the floor-timbers of the ship, and directly over the proper keel. These are contrivances for enlarging the base on which the mast rests as a column: for as, in proportion to the height and width of a column, its base must be enlarged, or it would sink into the earth, so, if the mast were to bear upon a point, it would break through the bottom of the ship.

The mast is supported upright by the shrouds and stays. The shrouds secure it against the lateral or rolling motion, and the stays and backstays against the pitching of the ship. These form what is termed the standing rigging. The mast does not bear upon the deck or on the beams of the ship; indeed, there is a space covered with canvas betwixt the deck and the mast.

We often hear of a new ship going to sea to stretch her rigging; that is, to permit the shrouds and stays to be stretched by the motion of the ship, after which they are again braced tight; for if she were overtaken by a storm before this operation, and when the stays and shrouds were relaxed, the mast would lean against the upper deck, by which it would be sprung or carried away. Indeed, the greater proportion of masts that are lost are lost in this manner. There are no boats which keep the sea in such storms as those which navigate the Gulf of Finland. Their masts are not attached at all to the hull of the ship, but simply rest upon the step.

Although the spine has not a strict resemblance to the mast, the contrivances of the ship-builder, however different from the provisions of nature, show what object is to be attained; and when we are thus made aware of what is necessary to the security of a column on a moveable base, we are prepared to appreciate the superior provisions

* Although they are solid arches connected with the building of the cranium, and bear no relation to the surfaces of the brain, the early craniologists would have persuaded us that their forms correspond with the surfaces of the brain, and indicate particular capacities or talents.

of nature for giving security to the human spine.

AGRICULTURE, &c.

A NEW MODE OF REARING ASPARAGUS.—

The asparagus seed should be sown from the middle of March to the last of April, in a rich spot, (not too much exposed to the mid-day sun,) one inch deep, and the seed one inch apart; after they come up, to be kept clear of grass and weeds during the summer, by hand weeding; to be dug up the next fall or spring—(I prefer the spring, as the roots do not grow during the winter, if set out in the fall, and are liable to be killed by a severe winter,) and set in beds prepared as follows: Dig out the size of the beds nine inches deep—cover the bottom three inches deep with rich marl, (which has been my practice,) though I believe that oyster shells half burned will be as good, as it is intended as a lasting heating manure, to protect the roots in winter, and force the vegetable early in the spring: then put three inches deep of coarse stable manure, then three inches of rich earth. This brings the beds on a level with the surface of the earth. Next lay off the beds in rows eighteen by twelve inches apart, and put a single eye or spire in each spot where the lines intersect, and cover them three inches deep with rich earth. Plank the sides of the beds, as this prevents grass and other roots from running into the beds, and also keeps the outside roots from being exposed, by the sides of the beds washing away. The beds should be kept clean by hand weeding, and all the earth and manure used in making them should be perfectly free from grass roots and noxious weeds. In the fall of the year, after the seeds have matured, cut the tops off close to the beds, (being careful that not a single seed is left to vegetate on the beds,) as they have already as many roots as the space they occupy should contain, and if additional roots are suffered to form from year to year from the falling of the seed every fall, the beds will soon be so much clustered with roots that the vegetable must degenerate, at least in size and length, as the new roots form near, or on the surface. Some prevent this by burning, but I think the best way is to pick them off by hand, before the ball that contains the seed breaks. You then top dress the beds with coarse stable manure, let it lie on all winter, and in the following spring rake off the coarsest part, and fork in the remainder, being careful that the fork does not touch the roots. Pursue this course two falls, and early in the third spring, before the beds are forked up, put on two inches of light well rotted manure—fork it with the stable manure, then put on from three to four inches deep of clean sand from the river shore, and you will cut in the month of April the best vegetable we have in Virginia. I would not give my beds for the balance of my garden. I think there is much in the kind of seed. I obtain my seed from New-York; they were marked "giant asparagus."

The cover of sand is important on several accounts; its being a great absorber of heat and moisture, so soon as the vegetable gets through the soil, it is hastily thrown through the sand to the surface in a bleached tender state, and the cutting from day to day is more uniformly of the same tender delicious vegetable. The sand also prevents grass from growing on the beds, which obviates the necessity of so much hand weeding during the season for cutting, by which the beds frequently become trampled, and the vegetable that is about to come through the surface mashed down, which not only destroys the spires that are so trampled on by the gardener in the process of hand weeding, but (I think) injures the root. The sand should be laid in the alleys between the beds, in the fall, when the beds are about to receive the top dressing of stable litter to keep them warm through the winter; and in the sand is about to be replaced in the

spring, it should be passed through a sieve of such size as will not let the balls (that contain the seed) pass through. This will be another means of preventing the seed from vegetating on the beds. There is a practice very prevalent with gardeners, to plant lettuce, radishes, and other early vegetables on the beds; this should never be done, and particularly with radishes, as they have a long root that extends to the roots of the asparagus, and must seriously interfere with them.

I frequently cut asparagus from three to five and a half, and once I cut a spire six inches in circumference, and from five to eight inches long; it could have been cut longer, but it is never tender near the root.—[Farmer's Reg.]

MANURING IN DRILLS.—A friend of mine, who I hope is now better employed, who was a man of general science and a practical and scientific farmer, exerted himself for thirty years to improve a poor sandy farm—by the method of manuring which I am about to mention; he effected more for it in the five years which preceded his death, than had been accomplished in the other five and twenty. From the shore of a saltwater sound to which the farm was contiguous, he littered his farm with sea ware. In the fall, he laid off with a plough the field which he intended for the next year's crop of corn, in trenches seven feet apart, twelve inches in width and six in depth. The plough traversed the same furrow until the trench was sufficiently wide and deep—its sides were made by the bar of the plough. Those trenches were then filled with sea ware from the farm yard, and stable manure; the latter placed in the bottom of the trench, and making from a tenth to a sixteenth part of the combination: the trenches were then covered with the plough, and upon the ridges thus formed, the crop of corn was drilled the succeeding spring. After the laying by of the corn crop, the field had a year of rest, after which the intervals between the corn rows were treated and used as the rows had been. The advantages of that manner of manuring are manifest. Almost all the fertilizing properties of the manure which escaped whilst becoming decomposed, fed the crop—the bed of the manure was not broken open, nor was it exposed to evaporation, until the soil had become "seized in its demesne as of fee" of all its treasures, save those which had already produced food for man and beast. A few manurings in that way will make a very poor field of any susceptibility rich.—[American Farmer.]

FERMENTED MANURE.—A writer in the Northern Farmer gives the following indirect proof against his own theory, by stating what old experienced farmers believe. Says he,—

"Strange as it may seem, many old farmers yet believe that old rotted manure promotes vegetation better than fresh, or unfermented manure! They appear to be ignorant of the fact, that the longer manure remains exposed to rot, the less nutriment or food for plants it retains; and the more it becomes assimilated to mere earth."

SAVING PEAS AND BEANS FROM MICE.—Chop up the tops of last year's shoots of furze, and sow them in the drill.—[Gardener's and Forester's Record, No. 3.]

CLEANLINESS OF THE DUTCH.—As to cleanliness, every dwelling-house is a model and a pattern; they seem to vie with each other on this point. The cowhouse is pure and clean, not a particle of filth being to be seen in it; the cows are as clean as if they were in a dining room; the milk and cheese houses, and in short every part of the house, are free from dust and dirt of any kind; the manure is placed at a convenient distance from the cowhouse, behind the house, and every particle is carefully collected together. The whole apartments, even the byre and

hay-house, are generally under one roof; and the cleanly system, and the admirable arrangement, give that comfort and pleasure which are too often wanting in this country.

MANAGEMENT OF CALVES IN HOLLAND.—

From the fact that Hollanders are distinguished for their dairy husbandry, their management of calves is deserving of attention. We find the following in the Transactions of the Highland Society of Scotland:

The most approved method of treating the calf is as follows: It is immediately after its birth taken from the cow, put in a separate place, and laid on dry straw. A little salt is given, and the tongue and mouth rubbed with it. It is also rubbed clean with straw. After the lapse of six or eight hours, the first beesting of the mother cow, diluted with one-third water, is given to the calf to drink, and this treatment is continued for some days, the liquid being given thrice a-day. Thereafter, during two or three weeks, they give the calf the milk as it comes from the cow, diluted with one-fourth water, in which now and then a small handful of sand is put; then churn-milk is gradually given, and it is supplied with hay; at the age of ten weeks it is brought out to the meadow, where it is also supplied with skimmed milk, churned milk, or whey. In this way each farmer raises the proper number of quey calves to fill up vacancies; but calves fattened for sale have milk from the cow three times a day.

For some days after calving the cow is milked thrice a day, and they then return to the usual practice of milking twice a-day.

BLACK TONGUE.—We scarcely open a newspaper from the country, without meeting a paragraph or a communication respecting a disease in horses and cattle called the *Black Tongue* or the *Burnt Tongue*. It is said to prevail chiefly among horses, but is not uncommon among cattle. Some respectable physicians have given their opinion, that if any person who was taking care of animals afflicted with this distemper, should get any of the matter of the diseased tongue into an eye or a flesh wound, it would be a very serious affair, and might prove fatal. We have heard that several persons in the country are now suffering under an inflammation from this cause.—[Boston Courier.]

BURNT TONGUE.—This disease, which we mentioned in our last, and for which we gave recipes, has become very prevalent in this and some other sections of the State. It is undoubtedly an epidemic, as it attacks those which have not been near or exposed to those suffering with it. Hogs, horses, and cows, all have it.

At first, it appears like a blister upon the tongue, or in black patches upon the lips. The animals appear sluggish, drool, and eat hay with difficulty: sometimes, they refuse all nourishment, and seem averse to drinking. Water, whether cold or warm, when drank, brings on an ague fit, and they tremble and shiver exceedingly. Some of the horses have been attacked in the feet. A swelling and eruption commences at the top of the hoof, accompanied with evident pain and soreness.

We have treated one case of this kind successfully by washing the feet with warm soap suds—then by a weak solution of chloride of lime, and a bandage soaked in pigs' foot oil. A very weak solution of oil of vitriol, used as a wash, has been successful in those cases where it has been tried. Physic of some nature should be freely used.—[Maine Farmer.]

POKE BERRIES.—Dr. R. R. Harden states, in the Southern Planter, that he has found these berries to be a certain cure of epilepsy.

NEW-YORK AMERICAN.

FEBRUARY 23—MARCH 1, 1834.

LITERARY NOTICES.

No. XVI.

Prairie Ronde, (Kalamazoo co. M. T.) Dec. 26.

"Stranger will you take a cocktail with us," called out a tall athletic looking fellow to me as I was making my way through a groupe of wild looking characters assembled an hour since around the fire by which I am now writing. There was a long haired "hoosher" from Indiana, a couple of smart looking "suckers" from the southern part of Illinois, a keen-eyed leather-belted "badger" from the mines of Ouisconsin, and a sturdy yeomanlike fellow, whose white capote, Indian mockasons and red sash proclaimed, while he boasted a three years residence, the genuine *wolverine*, or naturalized Michiganiian. Could one refuse to drink with such a company? The spokesman was evidently a "red-horse" from Kentucky, and nothing was wanting but a "buck-eye" from Ohio, to render the assemblage as complete as it was select. I was in the midst of the first real prairie I had ever seen—on an island of timber, whose lee while making slow headway for the last two hours, with a biting breeze on my beam, it had been my whole object aim and ambition to get—a comfortable bar room, a smoking "cocktail"—a worshipful assemblage (Goldsmith's Club was a fool to it) had never entered my dreams! Could I refuse to drink with such a company? The warm glass is in my frozen fingers. The most devout temperance man could see no harm in that! It is touched smartly by the rim of the Red-horse. It is brushed by the Hoosher. It rings against the Badger—comes in companionable contact with the Wolverine, "my respects to you gentlemen and luck to all of us."

Here was a capital commencement with just the sort of sallad of society, I have been long wishing to meet with, having as yet only tasted its component parts in detail. But auspicious as was the beginning, I nearly got into a difficulty with my new acquaintances a few moments afterward, by handing the landlord a share of the reckoning, and I took back the coin forced upon me, with many apologies upon my part for having presumed to pay part of a "general treat," while laboring under the disqualifications of being a stranger. Room was then courteously made for me by the fire-place, and accepting a pipe, proffered by one of the company, a few whiffs made me sufficiently sick and at home to lay it by without further ceremony. "There's a smart chance of cigars there in the bar, stranger, if you'd try some of them," said one of the hoshers, "yes," echoed the other "and they are a heap better than those pipes." "I allow" rejoined another of the company "but I wish that fellow would shut the door; he must think we were all raised in a saw-mill, and then he looks so peert whenever he comes." "Poor fellow," ejaculated one who had not yet spoken, "he is considerably troubled with youngness."

"From the eastern side, stranger," said another to me, "I'm told it's tolerable frog pasture. Now here the soil's so deep one can't raise any long sarce—they all get pulled through the other side. We can winter our cows, however, on wooden clocks, there's so many Yankees among us," &c. &c.

A scattering conversation was kept up in similar quaint expressions for sometime, but as Mr. Hackett has already given the cream of western phraseology in his highly original part of "the Kentuckian," I will not tire you with enumerating more of those which fell under my observation. These unique terms, indeed, were poured out so copiously, that it was impossible for one's memory, though elastic as a pair of saddle bags, to retain them. At last a train and a couple of carioles drove up to the door, and I discovered, upon their bundling merrily into these vehicles, that the whole company were

bound for a wedding. "Jim," cried one driver to another, snapping his whip, "let our horses run near the silk." Jim cracked his snapper, and the light carioles taking the lead, the more humble train skimmed rapidly after them: their dark shadows were soon lost upon the moonlit prairie, and the sound of their bells died away in the distance by the time I had regained my now solitary seat by the fire.

I have had but a sorry time since leaving the agreeable company. I spoke of in my last. To day indeed the weather though cold and windy has been clear. But on the two previous, I rode for the whole time through alternate snow and sleet which the wind at times blew so directly in my face as to make it almost impossible to proceed. In one instance while making my way through a dense forest of 12 or 14 miles between the openings without a cabin by the way, my horse stopped suddenly and looking about ten paces ahead, I saw a couple of deer standing immediately in my path and gazing on me with the most perfect unconcern—but my fingers were so numb with cold that I was unable to cock my gun while the timid creatures slowly retired within the depths of the forest. The Kalamazoo wound through this wood, but the under growth of timber was so very heavy that its waters though within a few yards of me were rarely discernible—and their ample flow when seen, as now swollen by the troubled current of Battle Creek and other tributaries, though capable of bearing boats of considerable burthen, possessed less charms for me than when I first struck the slender rill as it leaped unsullied from its virgin fountain, and went singing on its course. Still it was with regret, when at last ferried over the Kalamazoo, so long my only companion, that, on turning my horse's head to the south, I took leave of its Arcadian banks for ever. I passed the previous night at the little hamlet of Comstock, where an enterprising young gentleman, after whom the place is called, having the advantage of a good country, is creating a flourishing establishment around him; a frame store and several log cabins, with two or three mills, already giving some importance to the site in a new country. My ride of to-day, having started late, brought me about sunset a distance of 20 miles to the verge of Prairie Ronde; the intermediate country consisting partly of burr, oak plains, broken sometimes by the short round hills I have before described to you, and partly of broad grassy meadows running sometimes into marshes and again watered by some clear stream whose sandy bottom would contrast strongly with its low sedgy brink.—The ground became higher and firmer as I approached Prairie Ronde and then after riding for a few miles through the openings, when I expected to descend upon a broad meadow somewhat resembling the many I have seen in Michigan fully answering to my pre-conceived ideas of a Prairie, I came suddenly upon an immense piece of cleared table land some 50 feet above a pretty Lake in its vicinity. The scattering houses around its borders with the island of timber in the centre, and the range of six or seven miles of prairie on every side (assured me that this was Prairie Ronde, while the piercing blast which as the sun sunk redly on the opposite side, rushed out from his western resting place and blew the snow drift in my teeth, made me eager to cross the waste as rapidly as possible and sufficiently accounts for the pleasure with which I entered this hospitable tavern. The collection of houses which stand sheltered by this wood, is called "Schoolcraft." The wood itself, though only 5 or 600 acres in extent, has a small lake in the centre, and the village, if not the whole settled part of the Prairie, is distinguished by the number of fine running horses, blood dogs and keen sportsmen, it has, in proportion to the population. Fox hunting, on horseback, with full packs of hounds, is the favorite sport) though wolf, bear, and badger baiting have each their active followers. The soil is so easy of

culture and so generous in its product, that the settlers after attending to their necessary avocations have ample leisure for their many recreations. Prairie Ronde though like all parts of Michigan in a great measure settled by emigrants from the state of New York, is said to count a still greater number of its residents from nations of the south and west. The population generally was perhaps fairly represented at the assembly to which I so unceremoniously introduced you at the opening of the letter.

Niles, (Berrien Co., M. T.) Dec. 28.

I have been now for two days in the St. Josephs county, considered among the finest in Michigan, having, since I wrote the above, traversed the counties of St. Joseph and Cass, watered by the St. Joseph's river, which is the most imposing-looking stream I have yet seen. A ride of 14 miles from Prairie Ronde brought me first to its banks, which, rising occasionally 40 or 50 feet above the water, in a sudden bluff, look higher than those of any river I have yet described to you. You must already have gathered from my attempts at portraying Michigan scenery, that neither the grand, the picturesque—hardly even the romantic—are to be numbered among its characteristics. "The beautiful" comprehends them all: and yet you can readily imagine, that that beauty is neither tame nor monotonous, which can shine through the dreary months of winter, and make the half frozen and solitary traveller almost forget its rigors. It is true that one brought up in a more rugged and broken country might often miss the mountain tops leaning against the sky,—might sigh for the sound of a cascade, and long once more to plant his foot upon a cliff; and yet, where would the eye more delight to wander, than through these beautiful groves, which in summer must stretch their green arcades on every side? Where rest more happily, than on those grassy meadows on which their vistas open? These streams, too, that sparkle so over their golden beds, are they not substitutes for the rushing torrents of more mountainous countries? or does the lichen-covered crag tempt one's footsteps more than this teeming soil, when nature has carpeted it with the myriad of wild flowers which the summer's scene calls forth? To no scenery of our country that I have yet seen, is the term 'Arcadian' more applicable than to the rich and fairy landscape on the western side of the Peninsula watered by the Kalamazoo and the St. Josephs.

The latter stream, when I first beheld it, was filled with floating ice, which the deep and rapid tide brought down with such force, that my horse recoiled with affright, when I attempted to urge him into the current, at a point where an old woman told me was the usual place of fording. A rope ferry a quarter of a mile further on, removed the difficulty, and finding my way along a rich bottom where the trail was so encumbered with vines that it was difficult, even at this season, to keep it, I hailed a grim-looking Charron, with a shock head of hair, attired in a green hunting-shirt, who was standing in the door-way of a cabin on the opposite side, and crossing for me in his scow, I was soon conveyed with my Bucephalus across the wintry torrent. The country now became gradually more populous as I approached the village and prairie of White Pigeon. I had travelled 14 miles in the morning without seeing the sign of a habitation; and as one meets with neither travellers nor emigrants at this season, there is some company, even in the smoke of a chimney, though you do not stop to warm your fingers by the fire beneath it. I expected long before this to have fallen in with a most agreeable companion in a gentleman of the country, whom I met with at Detroit, and who is a considerable proprietor on the St. Josephs. Having a fine taste for natural scenery, and being one of the best rifle shots of whom I have ever heard, I anticipated

much pleasure and advantage from his company and guidance through the nearer sections of the Peninsula. But my journey through Michigan is now nearly finished, as it began, entirely alone. At White Pigeon, where I found quite a pretty village of four years growth, I seemed, in getting upon the stage route from Detroit to Chicago, to get back once more to an old country. I found a good tavern and attendance at Savary's, and discovered, by the travellers going north and south, that travelling was not as yet completely frozen up. There are a great many English emigrants settled upon this prairie, who, I am told, are successfully introducing here the use of hedges instead of fences, in farming. They are generally of a respectable class, and seem to be quite popular with the American settlers.

The morning was fine when I left White Pigeon to-day; and as the sun shot down through the tall woods, nothing could be more cheering than my ride among the beautiful hills of Cass county. The road, which is remarkably good, meanders through ravines for a distance of many miles, the conical hills resting upon the plain in such a manner as barely to leave a wheel track between them, except when at times some pretty lake or broad meadow pushes its friths far within their embrace. A prairie of some extent was to be traversed on this side of these eminences, and the floating ice on the St. Joseph's was glistening beneath its shadowy banks in the rays of the cold winter morn when I reached its borders, and arrived at Mr. Olds' tavern in this flourishing town of Niles. Myne host, who does not seem to be the most accommodating person in the world, has refused to provide supper for myself and two other gentlemen at so late an hour, assigning, as a reason, that "his women are not made of steel"—an instance of cause and effect which I merely put upon record as being the only one of the kind I have met with in all Michigan; and it is somewhat remarkable after the ready accommodation which, during all my rambles, I have met with, at all hours, from the cabin of the humblest settler, to find that money cannot command a meal at an established stage-house. It was impossible, however, to give myne host one's real opinion of his fitness to keep a tavern, when several gentlemen of the place present, very politely seemed to take the circumstance much more to heart than do they who are as much amused as vexed at the incident. My fellow sufferers appear to be both agreeable men, and as we are to travel in company to Chicago, &c. the sympathy arising from our present melancholy condition may insure a pleasant intercourse under happier auspices.

The county of Cass, through which I have passed to-day, has a population of more than 2000, and contains 7 prairies of 6 or 8 miles in diameter, besides many smaller ones. They produce, when cultivated, from 30 to 80 bushels of new corn, or 40 of wheat, to the acre. The mode of planting the former is to run a furrow, drop the corn in, and cover it with a succeeding furrow, which is planted in a similar way, and the field is rarely either ploughed or hoed after planting. There are several pretty lakes in this county; but it is not so well watered as St. Joseph's, through which I passed yesterday, which for local advantages of every kind, as well as fertility of soil, is generally considered one of the best in the Peninsula. I like Kalamazoo county, however, as much as any part of Michigan I have seen. I am now within 8 or 10 miles of the Indiana boundary, and some twenty or thirty only from the shores of Lake Michigan, having described nearly a semi-circle in my tour through the Peninsula, including, with some deviations, the counties of Wayne, Monroe, Lenawee, and Washtenaw, on the east, Jackson in the centre, and Calhoun, Kalamazoo, St. Joseph's, Cass and Berrien, on the west; and I have not met a resident in that whole range but what was pleased with the country,

and I may almost say attached to its soil. The females indeed will sometimes murmur, and in some remote places I have heard those whose conversations indicated that they had not been brought up with the most ordinary advantages, complain of "the want of society!" But even these would love to dilate upon the beauties of the country when the flowers were in bloom. Others again who would prove an ornament to any circle, would sigh at one moment for the comforts and elegancies of their maternal homes, while their eyes would kindle with enthusiasm the next, when speaking of the appearance which the woods around their new dwellings wore in summer. Small communities form but slowly in a country where the settlers, instead of gradually pushing their way together into the depths of the forest, as at the Eastward, drive their wagons in any direction a hundred miles through the openings, and plant themselves down a day's journey apart, just where their fancy prompts them. This will account for my so often lighting upon a pleasant hamlet after a day's travel through a perfect wilderness. The river St. Joseph's debouches into lake Michigan in this county; and as a steamboat will probably run the next season from the town rapidly growing at its mouth, to Chicago, a Railroad from Detroit to this steamboat harbor, is only wanting to bring the visitor of Niagara within a few days' travel of Chicago, and carry him through the flowery groves of Michigan to one of the most important points in the Union, and what may be termed the central head of the Mississippi Valley. Delmonico may then stock his larder with grouse from the meadows of Michigan, and Gassin try his skill upon the delicious fish that swarm her lakes and rivers (would that I could at this moment witness some of their curious orgies) while sportsmen will think no more of a trip hither than they do now of an excursion to Islip, Rayner South, or Patchogue. In the mean time I have secured you the seeds of more than 20 varieties of wild flowers, which I shall send to their destination as soon as possible, lest from the rapid increase of internal communication they shall lose half their value from ceasing to be a variety.

H.

HISTORY OF THE RISE AND PROGRESS OF THE ARTS OF DESIGN IN THE UNITED STATES. By WILLIAM DUNLAP.—This, though a work in *posse* and not yet in *esse*—is one towards which we have for some time desired an opportunity of calling the attention of our readers—and asking their encouragement by subscription to it.

Mr. Dunlap's name as an agreeable writer, is familiar to the country. His latest work, the History of the American Theatre, met with great and deserved success—and we cannot but anticipate an equal degree of success, for that now under his hands, artist as he is, as well as author—and of which we can furnish no better or more attractive notice than that set forth by himself in his proposals for its publication by subscription.

To trace the progress of Painting, Sculpture, Engraving, and Architecture, in our country, and bring before the Public a connected series of facts, respecting the lives and fortunes of those individuals, whether native or foreign, who have exercised any of these arts in the United States, appears to be an undertaking, which, if executed with moderate abilities, and a strict regard to truth, will form a portion of American History both entertaining and instructive.

The materials collected by the author of this work, will be chronologically arranged, from the early days of our existence as colonies to the present time. To rescue from oblivion or misrepresentation the names of our earliest Artists, and to record the effects produced by the visits of foreign Professors to our shores, appear to be subjects of sufficient interest to command the attention of our citizens generally;—to the great body of Artists now exerting their talents in the Republic, it is a species of knowledge that seems indispensable.

The most ample Biographies of all known Artists, native or foreign, who have exercised their professions in this country, will be given. And when we recur to the names of those who, with West, Copley, and Stuart, have passed away, and to the brilliant constellation which now adorns the United States, it will be seen that the biographical portion of the work will be as extensive, and as much varied in character, as the most eager thirst for this species of knowledge or entertainment can desire.

The writer of this work has had personal knowledge of most of the Artists who will be the subjects of its pages, from West and Copley to the men of the present day. Information and assistance have been liberally furnished from the best sources. Those most conspicuous in our literature and arts, have most freely aided the author. This enables him confidently to promise such a collection of facts on the subjects of which he treats, as could not be submitted to the public from any other pen.

The worth of the work will principally consist in its authenticity. Opinions advanced may be valuable; historical accounts of pictures curious; personal narratives interesting; but facts shall be undeniable—and of such importance to the history of the country, that it would be incomplete without them; for it is presumed, that the history of those arts which civilize mankind, and embellish society, form an essential portion of the history of all nations.

We can add nothing to this simple outline, which could have the effect of enhancing such a work in the eye of the public. We, therefore, only say in conclusion, that the publication is already in a considerable state of forwardness—that it will be comprised in two 8vo. volumes of about 400 pages each, at the price of \$5 dollars—and that we shall very gladly receive at this office the names of any persons disposed to subscribe.

THE AMERICAN JOURNAL OF SCIENCE AND ART, January, 1834; by BENJAMIN SILLIMAN. [MD. LLD. &c. New Haven, HEZEKIAH HOWE & Co.—We referred some weeks ago to the paper of this number which was not then published, that upon the whole will interest most persons—that on the meteoric phenomena of the 13th November last. We shall look with interest for the conclusion in a future number of this paper; though not with much expectation, we confess, of seeing any satisfactory explanation of this extraordinary phenomenon.

THE NEW ENGLAND MAGAZINE, for February: Boston, J. T. Buckingham.—A charming number—light, graceful, spiritual, and withal, sensible. We have hesitated between two or three short and clever articles—Connecticut as it was, the Eating Philosopher, &c. &c.; but have finally settled down—mainly because it was the shortest—on Nicolo Paganini:

The Devil came fiddlin' thro' our town.—*Scotch Ballad.*

It is well known of John Bull that he spells his favorites and then punishes them. He made an Orpheus of Paganini, and then reviled him because he was not born or bred a hero.

This great personage, who looks a good deal like Mephistopheles, gave a farewell concert at Drury Lane, in August last. Though the popular favor towards him had waned, yet the house was crowded. The prints give a pretty good representation of the solemn musician,

"Black he stood as night."

His graceless bow was that of an ill-jointed, paste-board man, and no smile played over the long wrinkles of his visage. He seemed to stand alone in the world—delighting thousands, but having sympathies with none. He is sharp and thin. "The case of a treble hautboy were a mansion for him. His appearance is spectral and impressive.

"His look
Drew audience and attention still as night,
Or summer's noontide air."

Music, however, is a forced plant in London—it is a luxury for which men pay largely, as for grapes, and pines; for they cannot raise it. It belongs to Germany and Italy,—to Ireland and Scotland; but not to England. Though Mr. Bull's ears are not over delicate, like Bottom, it pleases him to have them tickled. The strains of Rossini fell upon them with little power; but when the necromancer struck up—albeit, but on one string—"St. Patrick's day, in the morning," the whole assembly was in an ecstasy. The silence, however, was like that of the desert,—every one held his breath till the tune was finished,

and then came forth a burst of applause that would have roused any mortal sleeper. If it should please Paganini to visit us musical Hesperians, let him play many of the simple old tunes, such as delight "the knitters in the sun." He breathes into them a new soul.

Genoa has the glory of giving birth to Columbus and Paganini. A dream of his mother, like most omens, tended to verify itself. An angel appeared to her in a dream, and promised to make her son Nicolo a great player on the violin, who accordingly began upon a fiddle as large as himself, and he gave concerts at nine years of age.

His father believed as much in fortune as his mother in angels; for he was ever dabbling in lotteries. He received more profit from his son's concerts, who, at fifteen, was a travelling meteor, attracting the worship of the musical Italians. His father threatened to slaughter him, unless the profits were given up, and, for a while, Nicolo surrendered them, —about twenty thousand francs.

Soon Paganini had no rivals. Lafont, the Parisian, indeed, courted a trial, and came off shorn of his laurels.

"Strange that such difference should be,
"Twixt tweedle dum and tweedle dee."

Success was followed, as in all things, by envy and slanders; and fictions of murders, of the drugged bowl, and the dagger, were believed of Paganini, on no stronger evidence than his physiognomy. A dun-geon, it was said, was for years the seclusion, in which he acquired the magic of his art. All men agreed upon the dungeon: there was some difference of opinion as to the nature of his crime. Some ascribed to him the crimes of Salvatore Rosa, and affirmed that he had been a captain of banditti; others softened his offences to those of a simple Carbonare, or to having killed his antagonist in a duel. But the most romantic story was generally believed, that he had murdered his wife or his mistress. These reports, though they were of no advantage to his character, did no injury to his calling: men and women were the more anxious to see him, as they could at the same time be gratified with the hearing of music and the sight of a murderer. A bad name is of great use to a good performer of any kind, and the person that robs him of that often makes him poor indeed. At Vienna, however, Paganini denied the whole story of the incarceration with its adjuncts.

From a memoir we extract the following, which shows a name as widely spread as that of Charles XII. "Italy, from Mont Blanc to Vesuvius, from the heights of Abruzzi to the shores of the Adriatic, resounded with his praise. The strains of his wonder working violin were borne on the waters of the Danube, till the ocean murmured 'Paganini.'"

THE UNITED STATES REVIEW, No. I. Philadelphia: A. WALDIE. New York: G. & C. & H. CARVILL.—Periodical literature would seem, of all others, best adapted to a busy, inquiring, but not ever studious people, like ourselves. It is of a nature to be taken up at any moment—to be relished at broken intervals—and, by its variety, to catch and fix the attention, even of minds habitually intent upon the varied pursuits of active life. Yet, so far as the matter is understood by the public, this sort of literature does not meet with the degree of encouragement that, a priori, might have been anticipated. The North American Review, the oldest of our Quarterlies, only now, after long years of existences and supported as it undoubtedly has been by much sustained talent, affords a reasonable remuneration to its conductors. The American Quarterly—younger in the field, though not less able—yields not yet any such return for the expense and labor connected with its publication, as to make it an object of any considerable value; and meanwhile, the Southern Review, got up in Charleston, and written with great general ability, but too deeply tinged with peculiar political views, and partly perhaps because of that tinge, after struggling through some two or three years of fitful existence, perished. In the face of circumstances, apparently so little encouraging, we have here the first number of a new Quarterly; and not one of these before mentioned presented itself, we are persuaded, in as prepossessing a shape as this one, in all that regards the mechanical execution of the work, paper typography, &c.—with or more general claim to consideration on the score of its litera-

ry contents.—There is not indeed, any brilliant paper in this number—no one marked by particular and eminent talent—but all the articles are well done—the doctrines inculcated, and the general tone of thinking is such, as liberal and educated men will approve—and the whole scope and spirit of the publication recommend it to public patronage.

The contents are—Art. I. On Anniversary Discourses—in the course of which exception is justly taken to such addresses as—intended for mixed audiences, and for the most part on kindly occasions—introduce debateable topics of politics or political economy—that of Mr. Maxcy, delivered before the Brown University of Providence, and that of Mr. Kennedy, delivered before the American Institute of this city, are cited as bad examples in this particular.—

Art. II. On the Use and Abuse of Political Terms. is quite interesting, and refers to a book which, from the exhibition therein made of it, we hope to see republished in this country; where, *par excellence*, the abuse in question prevails. Art. III. recalls in a kindly manner the poems and prose works of Richard H. Dana. Art. IV. On Anti-Colonial History, annihilates pretty much at one blow Meulton's History of New York, and Heckelwelder's flattering fictions about his favorite race of the Lenni Lennapes. Art. V. is on Mrs. Lee's Memoirs of Baron Cuvier. Art. VI. On Traits and Stories of Irish Peasantry, which are highly praised. Art. VII. On imprisonment for debt—adverse to the law abolishing that remedy.—Art. VIII. On Ancient Art in Egypt and India. Art. IX. On Lucy Aiken's Court of King Charles I.; and Art. X. On the Temperance Cause, which it sincerely but temperately advocates.

THE HEART, DELINEATED IN ITS STATE BY NATURE, AND AS RENEWED BY GRACE, by a Presbyter of the Protestant Episcopal Church: 1 vol. New York, Swords, Stanford, & Co.—A skilful moral anatomist has, in this little volume, laid bare the self-delusions of the human heart—its tendency to error and evil while unregenerate—and its consequent need of those proper religious influences, which can alone so regulate its emotions as to render them conducive to happiness here, and fit its possessor for a better world.

THE HEIRESS, a Novel; 2 vols. New York, Harper & Brothers.—Novels have been scarce lately—new ones we mean—and therein consists the best chance for success of this we now announce; which, on other grounds, and amidst active competition, judged on its merits, would hardly run a brilliant career.

A NEW TRAGEDY is to be shortly brought out, as we hear at the Park, under the auspices of Miss Kemble and her father. It is from a native pen, and will not fail, we think—for we have had a peep at the M.S.—aided as it will be by the talents and skill of the Kembles, of brilliant success.

FOREIGN INTELLIGENCE.

FROM ENGLAND.—After Saturday's paper went to press, we received our London files by the New York to the 7th ult. We make from them such extracts as are of interest and we can find room for.

The leading topic is the state of uncertainty respecting the course which Russia may pursue, when apprized of the preparations making upon a large scale, both in England and in France, to have a large naval force in the Mediterranean.

The London Times—from which paper of 6th January, we give a long extract—is for striking a blow, or at any rate making the demonstration so real, that Russia shall not mistake its nature or purpose. The Spectator of 4th January thus comments on Russian affairs:

An article in a German newspaper, the *Allgemeine Zeitung*, on the state of Turkish affairs, and

the policy of Russia, appears to have effected a change all at once in the tone of our Government journals. Thus, on Monday, the *Globe* spoke of the "idle endeavor in some quarters to contrast the language of Louis Philip, in his late speech, with his actions, and to argue, from the improved condition of his army, as well as from the active equipment of ships in our dock-yards, that the intentions of the French and English Governments were not so pacific as their professions." The whole tenor of the *Globe's* remarks was to discourage the idea that Russia would "exasperate both the Great States of the West." But on Tuesday the German papers arrived; and in the article, evidently official, above referred to, it was intimated, that if the French and British fleet was reinforced, Russia would be compelled to arm some vessels. This threat immediately caused our Ministerial organ to assume a war-like tone; and on Wednesday we were reminded that it is the unquestionable intention of Russia to model Turkey into a species of tributary State, or a convenient vassal; that the Porte, under such protectorship, would be rendered subservient to designs hostile to France, England, and all other European states; that Russia has put off the payment of her last instalment of the Greek loan; that no one can be deceived by the smooth tone of the Austrian journals; and finally, that Russian ambition must be resisted "by friendly remonstrance, to rectify sinister intentions, and, if that proved unavailing, the adoption of the stronger alternative." Stronger alternative, of course, means war.

The *Times* spoke out, as usual, with more decision of tone. The necessity of prompt and vigorous measures is insisted upon; "negotiations, despatches, and Lord Ponsonby, and the rest of it," are laughed to scorn; a few broadsides are recommended, as the right kind of protocols to bring Russia back to good manners; and Englishmen are told to bear in mind, "that there is such a thing as settling a dispute in a manner the most satisfactory by administering a good knock-down blow at once."

The conclusion to be drawn from all this vaporizing (which, looking to the actual state of affairs in the East, would have been quite as appropriate last week as the present), is simply this—that Ministers would fain have it believed that they are quite ready for war, and resolved, if necessary, to "strangle the Russian fleet in the cradle of Odessa." The remarks in the Austrian journal, and those which have appeared in the *Times* and *Globe*, are merely newspaper protocols, and as such of very little value. The proceedings of Russia must determine whether we shall go to war or not. If the Emperor is resolved at all hazards to become master of Constantinople, the Euxine, the Levant, and the Adriatic, there seems to be no help for it, and a war must ensue. The policy, therefore, of our Government and that of Louis Philip in making preparations for it, is undoubtedly a sound one. And it was extremely "idle" in our Ministerial organ to endeavor to lessen the effect which those preparations were intended to have upon the designs and proceedings of Russia, by representing the intentions of France and England as being so pacific. The fact is—and now we find it announced clearly enough—that if Nicholas yields, we shall all be good friends; if he persist in his schemes of aggression, our actions will no longer be pacific.

That Russia, will however, hold back, for the present, seems most likely. Excellent reasons may be assigned for her continuing to practice the temporizing policy by which she has hitherto gained so much. It will depend upon the degree of vigilance used by British and French statesmen, whether that policy shall in future be as successful as it has been hitherto.

[From the London Times of January 6.]

The *Journal des Debats* seems to be of opinion that Russia will yield to the remonstrance of Great Britain and France, backed by their preparations for hostilities, and will consequently relinquish the immediate execution of her designs upon the Turkish capital and its neighboring posts. We have no doubt that the maritime preparations of England, and the mixed ones made by France, might, though unaccompanied by any formal remonstrances, have a better effect than merely modifying or suspending the realization of the aggressive schemes entertained by Russia; provided the latter Power could be convinced that the preparations of this portion of Europe were real armaments—that they were calculated for purposes of actual resistance, instead of being what are commonly called "demonstrations,"—menaces got up for the sake of intimidating an enemy, and, failing in that object, to be at once laid aside, and followed by humble acquiescence. There is nothing so silly as a "de-

monstration" which bears upon the front of it that it is a demonstration, and nothing more. Wiser by a great deal to do nothing, for in the latter case we save all useless expense, and leave our resources in that respect undiminished. The Tories, combined with the low Radicals, through their daily and weekly prints, are laboring to persuade the people of this country that the period has long since passed at which it would have been possible for England to interpose any serious check to the march of Russian encroachment, and with consistent wickedness they flatter the Autocrat, not only that he is too strong to be resisted, by this country, but that his designs are just and meritorious, and such as he ought not to abandon. This is of a piece with the factious treachery which has encouraged the stubbornness of the King of Holland during these two years, and advised him to hold out against the pacific endeavors of England towards the settlement of the dispute with Belgium, "in hopes that something might turn up," either on the Continent through a war, or by a change of Ministry and the return of Tory councils here in England. We do not deny that in days of yore some examples of the like spirit may have been found to actuate the movements of persons who were not Tories. The memorable instance of Oczakow cannot in common justice be overlooked, when an opposition embassy was despatched to the Empress Catherine, and assurances held out to her that by a due degree of obstinacy she would defeat the plans of the British Government of that day—a council on which she had cunning enough to act; and the consequence was, that Mr. Pitt's resistance to the project of the female Autocrat miscarried, although the other half of the factious undertaking failed, for the Minister retained his office. Why do we recur to these crimes of another generation? To condemn them—to give weight to the stigma with which we would persuade the people of England to visit the present iniquities of the ultra-Tory junta, as manifested in their Dutch, their Portuguese, and the Russo-Turkish counteraction (it is all but treasonable) of the measures adopted by the King of England for the maintenance of British interests and honor. The attempts to keep open the discord of the Dutch and Belgians, in which the English Tories have so largely shared, have hitherto served in no small degree to distract the ears of this Government and of the French from the affairs of Turkey, and to weaken their joint opposition to the Autocrat in that quarter. But the rapid growth of the danger is, we trust, helping out the remedy. We have said that a demonstration once discovered to be a demonstration on the part of these two Governments, is worse than none; of little value, moreover, is a remonstrance carried on in words, and ending in resignation. Russia has so deep a stake in the game she is now playing, that she laughs at the murmurs, and not less at the threats of other Governments, as she will at their noisiest preparations for war, if she have any solid reason to suspect that, after all, no war will be ventured on by the parties making them. So great, besides, is the object aimed at by Russia, and so keen and intense her passion for realizing it, that if she suspend her work to-day, she will resume it to-morrow, entailing on England an incessant course of watchfulness, and extreme uneasiness on the whole European world. The maritime force of this country, therefore, ought to be maintained on a highly effective footing, and not a moment lost in the presence of an enemy so unremitting in his activity, and so powerfully impelled towards the accomplishment of his fatal design.

It is rumored that Austria has given pacific "advice" to Nicholas, which may induce him to desist from this odious undertaking. Austria is the China of the west. Stupid and immovable in the dotage of despotism—hating all knowledge, because dreading all change—Austria "advises" Russia. But will the Czar, untouched by the angry remonstrances of England, be shaken from his purpose by Austrian advice? England must take counsel from her own courage and foresight—they are the sure safeguard of individuals and nations.

We see that M. Pozzo di Borgo on Wednesday last complimented the French King in decorous terms, and delivered some vague prognostics favorable to the continuance of tranquility. It is the policy of Russia, as of all mediators of aggression, to cover ambitious purposes in the garb of peace. The representatives of the French people are, however, at their post. M. Dupin, President of the Chamber of Deputies, thus expresses himself to Louis Philippe—"Peace, as far as it may be possible; but such a peace as you can alone desire—a safe and honorable peace, worthy of the nation."

These are not words which indicate any deep-rooted confidence, in the phrases of M. Pozzo di Borgo. The winter season for the present paralyzes all movements, but half the winter season has gone by.

In France naval preparations on a considerable scale were in progress. The answer to the King's speech was under discussion in the Chamber. The ministers had elected all the officers of the Chamber but one, M. Persil, the Advocate General, whom they proposed for one of the Vice Presidents, but he was defeated by M. Beranger 165 to 98.

M. Persil has rendered himself very obnoxious by persecutions of the press.

Sir J. Campbell remained still a close prisoner in the Castle of St. George, Lisbon; and the British Ministry has declined to interfere in his behalf.

The Portuguese quarrel is stationary.

Don Miguel had rejected an offer of mediation, made to him at Santarem, by the Queen of Spain; whose Ambassador, Baron Rameford, had an interview with him on the 17th of last month. General Rodil had made a fresh incursion into Portugal, as far as Braganza, in search of Don Carlos; but only succeeded in capturing some of the Junta who attended him. There are rumors of naval preparations by the agents of Don Miguel; and it seems to be allowed that he has lately been successful in recruiting his army from among the peasantry. In the mean time, hostilities have not recommenced.

In Spain the quarrel assumes more and more the character of a guerilla contest.

The insurgents in Biscay, Navarre, Arragon, and Valencia, are again appearing in considerable force. The Queen's troops had been defeated in some skirmishes; and the rebels were sufficiently strong to make a formidable attack upon Tolosa, on the 26th of December; but were successfully resisted. Zavallo, the General of the Franciscans, who is mentioned as the real leader of the Monkish party, has been negotiating with General Valdez; but he assumes too high a tone to make it probable that an accommodation will be the result of their communication. The Madrid correspondent of the *Times* says—

"It is known that Zavallo was at Bilbao at the time of the death of King Ferdinand; and it was there that, as soon as the intelligence arrived, the insurrection broke out into a sudden flood of mutiny." Judging of the rest of Spain by what he had observed in his own immediate neighborhood, Zavallo had expected that the rising would be general; and it would undoubtedly have been much more general than it has proved, had the Pretender only ventured, when the tide turned in his favor, to show himself in the country. But the time has gone by; and the cause of Don Carlos is not to be saved by all the skill of Zavallo, nor by the high tone he assumes in his correspondence with General Valdez.

In fact, there seems no reason to apprehend serious danger to the Queen's throne from the insurrection; though, from the nature of the support it receives, and the miserable state of the Government finances, it may be extremely troublesome for some time to come. In Madrid, Zea Bermudez is more unpopular than ever; and the new Minister at War, Zarco del Valle, is not in much better odour.

The *Indicateur* of Bordeaux of the 31st ult. has the following from Bayonne, dated the 29th ult.:—"Saarsfield's return to Pampeluna with 3 000 men, having left a similar number at Tafalla, is confirmed. The conduct of this General has appeared very suspicious, not only to the inhabitants of the country, but also to his own troops, who remarked that in his recent march he always took the opposite direction to that of the insurgents. There is also much complaint that Saarsfield has disarmed the forces of Gen. Lorenzo, who occupied Estella. The greater part of the troops of the latter have been replaced by others, who have not given the same proofs of valor, and who are not so accustomed to conquest as those removed. All the Queen's troops are about to march, in order to attack, in every direction, the Carlist bands that are spreading desolation through the country. Of the Valencia faction only forty men remain between that province and Arragon."

STILL LATER FROM FRANCE.—By the Havre, from Havre, we have Paris papers of 8th January. These present the case of the Queen of Spain in a somewhat more favorable aspect; but still without any material change.

There is nothing further of a decisive nature as to Russian affairs: of speculation concerning them and plain talk in the Chamber of Deputies a great deal—of which, with more leisure and space, we will translate portions for our readers.

The *Journal des Debats* in commenting on that part of the President's message which refers to the non-payment of the French indemnity, holds this language: "We hope a legislative vote will soon put an end to the only difficulty which exists to the completion of the treaty concluded with this country. All is not sacrifice for France in this Convention; and the benefits assured by it to our commerce will at least compensate for the payment of a debt against which our integrity would not permit us to plead prescription."

PARIS, Jan. 7. Evening.—The Stock Market has been animated to day, and the price of stocks has experienced a further improvement, which is attributed to a rumor that the Government will have no need to have recourse to a loan. A rumor of the capture of Oporto by the Miguelites has been current, but it produced no effect, as Don Miguel's Loan remained stationary without business.

On Sunday the Ambassadors of all the Northern Powers assembled at the Russian Embassy, when it is said Count Pozzi di Borgo communicated to them a Note he had received from the Minister for Foreign Affairs relating to the affairs of the East.

The *Sentinelle*, of Bayonne, of the 2d inst., has the following extract of a letter of the 25th ult., from Madrid:—"Gen. Quesada has succeeded in destroying all the bands which were formed in Castile. Several of their chiefs have been shot. It was with great difficulty and risk of falling into the hands of the Queen's troops that Merino gained Portugal with 16 of his followers. It is certain that the Queen's army is to enter Portugal, but it must previously be reorganized, for the corps of Morillo and Rodil are not worthy of the name of an army. Some politicians assert that it is intended to drive out Don Carlos and Don Miguel, and to join Don Pedro in establishing the government of Donna Maria throughout Portugal. Others, however, affirm that the Spanish Cabinet has an understanding with France and England for driving out both the pretenders to the throne, and taking possession of the disputed kingdoms. But this is highly improbable, for the Spanish government, which cannot yet be said to be master of its own provinces, is little capable of effecting the conquest of a country defended by the army of Don Pedro, which is much more perfect in the art of war than that of Spain, without reckoning the troops of Don Miguel, which would also act against the invaders. The *Sentinelle* also states the arrival of letters from Bilbao, announcing that a terrible conflict took place on the 30th ult. at Durango, between the Queen's troops, commanded by General Valdes, and the Carlists, under Zubala, in which, it is said, the Christians were beaten, and lost two pieces of cannon.

The *Memorial Bordelais* of the 3d instant, gives the following, under the date of Madrid, December 25th:—"The troops of Morillo, seconded by the Government, have entered the Portuguese territory, and seized 40 Carlists, whom they have brought into Spain."

A letter of the 30th ult. from Bayonne, states, that General Lorenzo, after a severe contest at Los Arcos, has beaten the insurgents of Navarre, who were compelled to fall back upon Logroño.

LATE AND IMPORTANT.—The Editors of the *Daily Advertiser*, have received by the Francis Depau, which put into England, and sailed from Falmouth, on 24th ult., files of London papers to the evening of the 18th January, containing Paris dates to the 16th, and Madrid to the 9th, eleven days later than those previously received. It appears, says the *Daily Advertiser*, that Catalonia has risen en masse, and demanded a Constitution. General Valdez has returned to Spain, and Mina was probably on his way back. The Liberals so long persecuted and exiled have arisen, and are in a fair way of compelling the milder government of the Queen to yield to their determined demands. From Portugal we find nothing of interest. The *London Courier*, of the 18th

of January says:—The French papers of Thursday speak of the change in the Spanish Ministry, which we yesterday mentioned as one of the rumors of the Stock Exchange. Some of the papers, however, trace it up to the messenger which had arrived at the English Ambassador's. More than one of them speak of this series of events—the demands of Llauder, and the other Captains General, combined with the number of persons who have taken an interest in the proceedings in Catalonia—as a true revolution in Spain. We observe that General Don Jose Valdez, with other Constitutionalists, have returned to Spain from Paris. Mina will probably also now find his way back. The other news from Spain is of trifling importance.

LATEST FROM PORTUGAL.—The Pantaloon arrived at Falmouth on the 17th Jan. from Lisbon, with dates to the 13th. The differences between the Government and the Duke of Terceira were settled. The army of Don Miguel had suffered considerably from sickness. No movement had taken place between the armies. It is stated that Don Miguel's forces were not more than 6000; but the fortifications are so strong that it would require a much greater force to dislodge them.

PARIS, JAN. 16.—It has been remarked that Baron Rothschild makes frequent visits to the Minister of the Finances, the object of which probably is to settle the conditions of the new loan.—(*Journal du Commerce*.)

The National de 1834 gives the following details upon the communication of Gen. Llauder to the Queen of Spain, which are of considerable interest.—“We are informed upon good authority that the Queen, after having consulted her Ministers, and the diplomatists at her Court, returned, without opening it, the Exposition which General Llauder had sent by Colonel Sanz. On receiving it Llauder proceeded to the Municipality of Barcelona, and held a conference as to the next steps to be taken. He proposed a middle course, through which the remonstrance might reach the Queen without offending her; but he received for answer, as on former occasions, that it was too late to retreat, and that, if he did not feel sufficient confidence in himself to sustain with courage the part he had undertaken, he had better quit the Province. Llauder upon this put the packet under another cover, and sent it again to the Queen as she had returned it, without any additional letter. Thus the Governor of Catalonia conducts himself towards the Queen of Spain as one sovereign would towards another, and this exchange of communications assumes a most singular hostility. If any one doubts the truth of the above details, let him apply to the Minister of War, and we are confident he will not contradict them.”

The Memorial Bordaels of the 13th inst. confirms in the following terms the news of the resistance of the Captains-General to the Spanish Government:—“We have received news of the utmost importance, through several different channels. Catalonia has risen in a mass in the name of liberty, under its military chieftain, Llauder. This is the first cry of Constitutional Spain. Llauder has demanded of the Queen, in his own name, as well as in that of the 45,000 armed men which he has at his disposal, liberal institutions. Madrid is tranquil, but disquieted by Llauder's demand. There is reason to believe that several other Captains General, such as Quesada, Valdes, Morillo, are about to demand the dismissal of the Ministry.—We ardently desire the success of this revolution, for such it really is.”

The *Indicateur de Bourdeaux*, of the 13th inst. has the following from Bayonne, dated the 11th:—“A courier from the British Embassy at Madrid arrived here last night; he left that capital on the morning of the 8th, when all was perfectly quiet, and performed the journey without the necessity of an escort. The courier has important despatches from the Court of St. James's and the Tuilleries, the Captain-General of Catalonia having, in the name of that province, demanded a Constitution of the Regent; the number of signatures to the address is said to be nearly 50,000. This it was which occasioned the dispatch of the courier. By a decree of the Regent, El Pastor had been appointed Brigadier, and consequently is amnestied; it is well known that he, as well as Mina and other chiefs, were banished for the attempt made in November, 1830.”

The Vapor of Madrid states that Don Gregorio Alvarez y Perez, a canon and treasurer of the church of Burgos, had been arrested, and was in the chapel preparing for execution, when a courier arrived with his pardon. He was so much affected, by this unexpected clemency, that, immediately on being released, he wrote and published a pamphlet, exposing all the manoeuvres used to mislead the people, and urging them all to range themselves under the banner of their lawful Queen.

PARIS, JAN. 15.—It has been asserted on 'Change that the Queen, yielding to the necessity in which she is placed, has consented to the convocation of the Cortes, and has changed the Ministry. The President of the new Cabinet is said to be the Marquis de las Amarillas.

This news, whether true or false, produced some improvement in Spanish Stock; the French Funds also recovered a little.

The only news from the frontier that is worth mentioning, is that of a new combat on the 8th with the Carlists, commanded by Zabala; in consequence of which they were again dispersed.

The letters from Bayonne speak also of the arrival at Vittoria of 4,000 recruits, who are to be immediately incorporated with the troops.

Famine in Russia.—The *Swabian Mercury* gives the following letter from Odessa, dated Nov. 22:—“The general dearth becomes very alarming, and it is impossible to foretell what may ensue. Every article that forms the food of man is becoming daily more and more scarce and dear. Meat alone is cheap, and this is because the graziers are obliged to kill their cattle for want of fodder. There are whole villages in the environs of Odessa that are entirely destitute, the inhabitants having left them, in hopes of finding bread elsewhere. The Sea of Azoff is no longer navigable, so that we have no chance of receiving supplies from the opposite shore. Immediately after receiving despatches from St. Petersburg, Count Wornozow

went off in all haste to Ekaterinoslaw, where the famine has already caused some deplorable disasters.”

Manufacturing Industry.—All the information we have received from the manufacturing districts leads us to believe that the operations of trade will be materially impaired by the present position of the United States. Almost every letter we have seen from America contains a caution to manufacturing and shipping houses not to send out goods, as there is no money to pay for them. We are glad to find in many instances manufacturers are acting upon this caution.—(*Morning Post*.)

LONDON, January 15th, 12 o'clock.—Previous to the close of business yesterday afternoon, in the Stock Exchange, an improvement in the Consol Market was expected, the last quotation having been 80½ for the account, at which price it opened this morning. A sudden decline, however, almost immediately occurred, some transactions being effected at 79 for the account; and numerous reports were in circulation relative to the resignation of Lord Grey, which was positively stated to have been accepted, according to some reports, in consequence of a difference upon the Portuguese Question; and to others, upon the Church Reform. Up to the present time, no confirmation of any of the rumors has been received, and a slight advance has taken place in Consols, which are now quoted at 80½.

Half past One.—The Consol Market is again a shade better, the present quotations being 87½ for Money, and 80½ for the Account. Bank Stock is 211 2½, and India Stock, 240 2½. Exchequer Bills are 44 46, and India Bonds, 22 24 prem.

“In the Foreign Market, Dutch Five per Cent. is at 94½ 95; and the Two and a Half per Cent. 49½; Belgian 95½ 96; Russia 103 to 4; Portuguese 57½; Regency Bonds 57½; and Spanish 23½. Brazilian Stock is 67½ 68; and Mexican remains without any fluctuation as 37½ 37, the letters brought by the packet contain no political news of importance.”

LATE AND IMPORTANT FROM SPAIN.—The following intelligence from the *Daily Advertiser*, furnishes information from Europe more important than any before received for a long while.

The effect throughout Europe of the ascendancy of liberalism in the councils of Spain—if that ascendancy can be maintained and confirmed—can hardly be conjectured.

There are later papers, too, from London, by two days—up to the 20th; and from Liverpool, of the 18th.

Extracts from these follow:

The Editors of the *New York Daily Advertiser* are indebted to the late Governor Cabrera, now an exile in this city, for the following highly interesting intelligence, received from his respectable correspondents, at Cadiz, under date of 22d January, by the brig *Herald*, which arrived at Boston on Monday last, having sailed on the 22d, the date of the letters, and which are from the most authentic sources.

The dates from Madrid are to the 17th of January, nine days later than those received by the latest arrival here, viz.: the *Francis Depau*, from England.

On the 16th January a most daring and deep-rooted conspiracy of the Carlist party was discovered.—The plan was to destroy the Queen Regent, her two daughters, the Infant, Don Francis, his wife, and all his children—in fact, to destroy all the Royal family. Many of the most distinguished persons, of all ranks, had been arrested and thrown into prison.

The Liberals became so indignant at the conduct of the Premier, Zea Bermudez, and his fellow ministers—by whose negligence the conspiracy had been so near being accomplished—that they repaired to the house of Zea Bermudez on the night of the 16th, for the purpose of destroying him; but being unable to find him, they vented their rage by destroying all the furniture and valuables.

The excitement was so great that the Queen Regent changed her government at once, by removing all her Ministers except Zarco Del Valle of the War Department. Martinez de la Rosa is appointed Premier, in the place of Zea Bermudez; Garoli is called to the Department of Justice; Vasquez Figueroa, Minister of the Marine; and Arandale to the Finance Department.

Nearly all the Captains-General of the various Provinces have addressed the most energetic representations to the Queen, requiring a representative government, and demanding the immediate assembling of the Cortes. A new state of things had taken place; the Liberals were again in power; and exiles from foreign countries were returning to the land of their nativity.

ENGLAND.

LONDON, (Thursday Evening, 1-2 past 7.)—The line to be adopted by Great Britain and France in respect to Russia and Turkey being now generally understood as implying no interruption to the general peace, the sensation in that direction is rapidly subsiding. The British and French fleets in the Mediterranean have been ordered—the former to Malta, and the latter to Toulon.

The exportation of horses from this country to Portugal is very extensive, but several hundreds have been detained for some days past at Portsmouth,

either from the want of conveyances, or the unfavorable state of the weather. One dealer alone has forwarded to that place upwards of five hundred horses since the first inst.

FRANCE.

Chamber of Deputies.

JANUARY 13.—The Duke de Broglie, on taking his seat on the Ministers' bench, was congratulated by several Deputies on his recovery from indisposition.

M. Benjamin Delessert read to the Chamber a proposition relative to the establishment of Savings Banks. The following is the substance:—

1. There shall be established successively in each chief town of every Department, a Savings Bank.

2. The Prefect shall nominate a Commission in each locality, to inspect and control the deposits and repayments.

3. This Commission, the members of which shall give their services gratuitously, shall have for President the Prefect or the Sub-prefect.

4. The Receiver of the Department, or of the Arrondissement, shall undertake the charge of Treasurer.

5. Deposits may be made once a week. No smaller sum than 1fr., and no greater than 300fr., to be received at one time, and from one person; and the deposits belonging to any one individual are never to be allowed to exceed 3000fr.

The Minister of Finance presented a project of law, having for its object the execution of the Treaty with the United States of America.

AUSTRIA.

VIENNA, JAN. 5.—All is silent respecting the East—the French Ambassador has despatched a courier to Paris, probably in consequence of the last accounts from Constantinople, which announced the departure of the English and French squadrons. The tone of the English journals is indeed very warlike, but nobody is deceived by this: for the aversion of the English nation to a war is well known; the funds are rising; the negotiations respecting Belgium seem to be proceeding, and it is hoped that by the serious intervention of the Powers, they will at length be brought to a conclusion. Count Lalain, Belgian Chargé d'Affaires here, is said to have received another appointment. Count Belle Brake, the Danish Secretary of Legation, is going in the same capacity to St. Petersburg.

TURKEY.

CONSTANTINOPLE, DEC. 17.—I refer to my letter of the 11th inst., and inform you that the energetic remonstrances of the Porte have succeeded in obtaining the withdrawal of the French and English squadrons, which had been considerably reinforced. The English and French Ambassadors sent the day before yesterday directions to the Commanders of their respective fleets to return to Malta and Toulon, there to remain until further orders.

The news of the retirement of the combined squadron has produced the best effect; it is now hoped that all existing differences will be shortly adjusted amicably.

ITALY.

The letters from Bologna to Jan. 5, say that several persons of distinction at Modena have come to Bologna, to escape the new persecutions which have lately taken place in the Duchy. Among these persons is the son of Count Conapiani, ex-Governor of Modena, M. Garofoli, ex-Chief of the Police, Marquis Campori, and some of the Guard of Honor of the Duke. Some think that a pretended conspiracy is the cause; others that these persecutions are connected with the affair of the unfortunate Ricci, who was condemned to death by a military commission, and shot in July, 1832. The truth is, that the Ministry do buon governo, having caused to be published some further depositions of the accomplices of M. Ricci, several persons look at Modena and Bologna as named in them, and thereby implicated. Those of Modena belong to the Ministerial Departments, the Court and the noble guard. Those at Bologna are of the first distinction; but among them are some who have not political opinions; others who, on account of their age, are exempt from all suspicion; for instance, Prince Bucciocchi, son of Elisa Buonaparte, who was killed by a fall from his horse at Rome, on Easter day, last year. This pamphlet, which has been published at Modena, has been received at Bologna, where it is the general subject of conversation. But at Modena on the 29th December, it was made the order of the day to all the corps of volunteers, in order to animate the peasants in favor of the Duke, and to excite their animosity against the persons named in these depositions. Colonel Fabbri, the Commander, made them renew on this occasion the oath of fidelity, and swear again to exterminate the Liberals.

[From the National Intelligencer of Feb. 19.]
OBITUARY.—Died, about meridian, yesterday, in this city, WILLIAM WIRT, Esq., aged about 62 years. In him, his family have lost all that can be lost, in one among the most tender, devoted, and enlightened of husbands and fathers.

Of all who witnessed the strong and heart-endearing ties which this event has sundered, there lives not one but must sympathize, from his inmost soul, with the amiable and exemplary wife, who at once imparted and partook the purest and highest enjoyments of conjugal union, and who is now to see a premature grave open to receive the mortal remains of him who was the source and the object of the hallowed affections by which that union was cemented and embellished—with children, to whom the hand is now cold and motionless, which but yesterday led them, with paternal solicitude and unerring aim, through the paths of human science, in all the intricacies of which the exercises of studious youth, and the sustained application of mature years, had instructed him, and which his genius had illustrated; to those children, the eloquent tongue, though not yet mute to grateful memory, no longer speaks, in living accents, precepts of wisdom, morality, and piety, so lately enforced by the example, and adorned by the life and manners of a Christian, a scholar, and a gentleman.

His country, indeed, has lost a citizen whose talent and virtues, always adequate to the highest tasks of public service, were always devoted, with unflinching patriotism, to his country's good: but to that country he has left an inheritance in the extended fame which will perpetuate his name with the enduring monuments of the age and land in which he lived.

His professional brethren must largely participate in all the causes of profound regret, both general and particular, that can affect either communities or individuals. Lamenting him as a brother, whom in life they loved with brotherly affection, and admired as the ornament of their profession; they have lost no time in evincing their alacrity to manifest their respect to his memory; and will, doubtless, follow out the first promptings of a spontaneous and all-pervading sentiment, and give unequivocal and lasting tokens of the sincerity and depths of their affection, their admiration, and their regret.

TRIBUTE OF RESPECT.—At a meeting of the gentlemen of the Bar of the Supreme Court of the United States, and of the Officers of the Court, at the Court Room in the Capitol, on Tuesday, the 18th instant, the Hon. B. F. BUTLER, Attorney General of the United States, was called to the Chair, and the Hon. JOHN SERGEANT was appointed Secretary:—whereupon,

Mr. WEBSTER rose, and addressed the Chair as follows:

It is announced to us that one of the oldest, one of the ablest, one of the most distinguished, members of this Bar, has departed this mortal life. WILLIAM WIRT is no more! He has this day closed a professional career, among the longest and the most brilliant, which the distinguished members of the profession in the United States have at any time accomplished. Unsullied in everything which regards professional honor and integrity, patient of labor, and rich in those stores of learning which are the reward of patient labor, and patient labor only; and if equalled, yet certainly allowed not to be excelled, in fervent, animated, and persuasive eloquence, he has left an example, which those who seek to raise themselves to great heights of professional eminence, will, hereafter, emulously study. Fortunate, indeed, will be the few, who shall imitate it successfully!

As a public man, it is not our peculiar duty to speak of Mr. Wirt here. His character, in that respect belongs to his country, and to the history of his country. And, sir, if we were to speak of him in his private life, and in his social relations, all we could possibly say of his urbanity, his kindness, the faithfulness of his friendships, and the warmth of his affections, would hardly seem sufficiently strong and glowing to do him justice, in the feeling and judgment of those who, separated, now forever, from his embraces, can only enshrine his memory in their bleeding hearts. Nor may we, sir, more than allude to that other relation, which belonged to him, and belongs to us all; that high and paramount relation, which connects man with his Maker! It may be permitted us, however, to have the pleasure of recording his name, as one who felt a deep sense of religious duty, and who placed all his hopes of the future, in the truths and in the doctrines of Christianity.

But our particular ties to him, were the ties of

our profession. He was our brother, and he was our friend. With talents, powerful enough to excite the strength of the strongest, with a kindness both of heart and of manner capable of warming and winning the coldest of his brethren, he has now completed the term of his professional life, and of his earthly existence, in the enjoyment of the high respect and cordial affections of us all. Let us, then, sir, hasten to pay to his memory the well-deserved tribute of our regard. Let us lose no time in testifying our sense of our loss, and in expressing our grief, that one great light of our profession is extinguished forever.

Mr. WEBSTER concluded by submitting the following resolutions, which were read, and unanimously adopted, viz:

Resolved, That the members of this Bar feel, with deep sensibility, the loss which the profession, and the country have sustained, in the death of WILLIAM WIRT, a member of this Bar, and heretofore for many years, Attorney General of the United States.

Resolved, That we cherish the highest respect for the professional learning of the deceased, for his varied talent and ability, for the uprightness of his professional life, and for the amiable and excellent qualities which belonged to him as a man.

Resolved, That to testify these sentiments, we will wear the usual badge of mourning for the residue of the term.

Resolved, That a Committee be appointed to offer to his bereaved and afflicted family, the condolence and sympathy of his brethren of the Bar; and to request that he may be interred in the City of Washington, and that his professional brethren be permitted to raise a suitable monument to his memory.

Resolved, That Mr. SOUTHWARD be requested to pronounce a discourse before the Bar, upon the professional character and virtues of Mr. WIRT, at such time, during the present term, as may suit his convenience.

Resolved, That the Attorney General do move the Court that these resolutions be entered on the minutes of their proceedings.

The following gentlemen were appointed by the Chair to compose the Committee ordered by the fourth resolution: Mr. SWANN, Mr. JONES, Mr. WEBSTER, Mr. CLAY, Mr. SOUTHWARD, Mr. SERGEANT, Mr. PETERS.

[From the Daily Advertiser.]

NEW YORK COLONIZATION SOCIETY.—The first meeting of the New Board of Managers of the Colonization Society was held on Monday, 17th ult. and was very fully attended—President Duer, of Columbia College, in the Chair. Samuel Ward, Esq. having declined the office of Vice President, the Rev. Dr. Bangs was elected in his room.

A committee appointed for the purpose of reporting the draft of an Address to the public on the subject of the affairs of the Parent Society at Washington, and the operations of this Society both present and in prospect, made an interesting report on those subjects, which was read and adopted.

The board determined, with great unanimity, to send a pioneer expedition to Africa, in May, for the purpose of making the necessary arrangements for the immediate foundation of the contemplated colony. For this purpose, Mr. Israel M. Searle, a graduate of Amherst College, was appointed to take charge of the same, under the superintendence of the Rev. Mr. Spalding, who had previously been appointed principal agent of the Society in Africa.

A resolution was likewise adopted for holding a public meeting at the Brick Church in Beekman st. on Tuesday evening next, for the purpose of giving more full and particular information on the subjects contemplated by the enterprise.

The report above-mentioned, after a recapitulation of the difficulties and embarrassments which the Parent Society has experienced from a defective organization, and the consequent indebtedness which they had incurred beyond their income, gives an account of the re-organization of the institution at the annual meeting at Washington in January last, under a much more effective and energetic system, with a statement of the pecuniary resources for the liquidation of their debt, and for the expenses of their future operations. We have not room for the insertion of the report at length, but the following extract from it will be found more immediately interesting to the auxiliary society, and the public, in this city.

"A new and important principle of action is also about to be adopted for the future operations of the Society. The Parent Board will probably hereafter wholly abstain from the superintendence in detail of transporting emigrants to the colony; and leave to such of the auxiliary and local Societies, as choose to undertake it, the labor and expense of collecting emi-

grants, sending them to Africa, and providing for them on their arrival, and until they can sustain themselves.

It appears to be generally expected that the Parent Society will confine itself to, and find sufficient employment in, governing and defending the Colony, enlarging its territory, fostering its civil, religious and literary institutions, and placing them on a broad and permanent basis. It will, however, and no doubt ought, to retain and exercise the power of controlling and regulating the auxiliary and local societies, in their mode of conducting emigration.—It should certainly prevent them from sending improper emigrants, or in too great numbers, or at improper times, or without necessary provision for their comfort and health during the voyage, and for their prosperity and happiness after their arrival in Liberia.

The Parent Society will, however, judge for itself in marking the lines of its future duties, and in that respect be regulated by wise and enlightened councils. But by dividing, in the manner suggested, the labor and responsibility, and securing the active co-operation of a greater number of devoted friends in different parts of the country, and at the same time acknowledging and yielding to the control and direction of a wise and efficient central head to check all extravagant or irregular action, the business of colonization hereafter, we trust, will be conducted with greater care, regularity and economy.

In conformity with this principle of action, the Colonization Society of the city of New York will hereafter itself expend in colonization, the money which shall be raised under its immediate auspices. To enable this Society to do that, the Parent Society has given us permission to establish a new settlement, to be called New York, at some suitable location in Liberia—and to direct all our energies and expend our resources upon that object.

In prosecuting it, we shall not endeavor to see how many free persons of color we can, by our own efforts, send to Africa; nor how many slaves we can emancipate. But our great aim will be, to promote, by all the means in our power, the true interests of those who may emigrate to our settlement, and the true interests of the Pagan population among whom they settle.

To this end our colony will be founded on the following principles:

1st. The selection of such Emigrants only as are Members of the Temperance Society, and of unexceptionable moral character.

2d. The settlement of them under such circumstances as will promote Agriculture, especially the cultivation of the staples of the African soil, such as rice, cotton, sugar, and coffee.

3d. The adoption of a system of universal education, and to provide at once the means of instruction in letters and the useful arts of life, not only for the colonists, but also for the native Africans who may live in the settlement and its vicinity.

4th. The entire prohibition of the use, and traffic in ardent spirits—except for medicinal purposes.

In view of the facts and objects above presented, the Colonization Society of the city of New York have adopted the necessary measures, to secure an efficient Board of Managers, and responsible and active officers and agents to conduct its future business and operations. The Society has resolved to establish a colony, and has already an exploring agent employed in Africa, to examine Cape Mount, the site of the contemplated colony—and if it shall be found an eligible position, to make the necessary arrangements for the reception of the pioneer emigrants. If the Society should be disappointed in the eligibility of this site, another one will be sought, and the like arrangements made. The Society, therefore, earnestly and respectfully invite the co-operation and support of their fellow citizens, in executing this interesting and benevolent enterprise. They pledge themselves that all money and property, contributed to this object, shall be faithfully and economically applied.

WM. A. DUKE, President.

IRA B. UNDERHILL, Rec. Secretary.

New York, Feb. 17th, 1834."

The Rev'ds Dr. Channing and Gannet, were lately summoned before the Grand Jury of Boston, to give testimony respecting a duel, but refused to disclose what they knew of the matter. The Grand Jury immediately made a representation to the Judge of the Municipal Court, who summoned those gentlemen before him, and they appeared. The result is given in the Boston Atlas.

The Commonwealth's Attorney stated to the Court the reason why these gentlemen had been summoned

and that the Grand Jury were now in Court, waiting for the decision of the Court, whether these gentlemen should be compelled to testify. He cited a passage from Starkie on evidence to show that by the common law, not even auricular confessions to Catholic priests were privileged from being testified to; that it appeared by the notes to Metcalf's edition of Starkie, that in many of the United States, confessions made to Protestant clergymen were not privileged, and that the Supreme Court in this State had settled the same principle in Commonwealth versus Drake, 15 Mass. Reported, page 161.

The Judge stated that clergymen were not exempted by the law from testifying when called before a Court or Grand Jury as to communications made to them as clergymen; "that the privilege of secrecy is strictly confined to persons acting as counsel, attorneys, or solicitors, in causes, and cannot be extended to those confidentially employed in other professions; that this is a privilege secured by law to the client rather than the counsellor. He referred to the case of the Duchess of Kingston, as cited by McNally on Evidence.

Dr. Channing stated to the Court that he had thought the communications made by a parishioner to his spiritual guide were sacred, and should not be disclosed, but in relation to the present case, he was suddenly called before the Grand Jury, and had little or no opportunity for reflection upon the subject; that since yesterday he had reflected upon the circumstances, and he now considered that any communications made to him in this case, were communicated to him rather as an esteemed friend, than to a spiritual guide; he was therefore now ready to testify.

Mr. Gannett stated that he viewed the communications made to him, as made in his character as a spiritual guide, and whilst he wished all artificial distinctions in favor of the clergy might be abolished, he hoped the Court would excuse him from testifying. He then read his reasons for declining to testify in such a case.

The Judge said that he certainly respected the delicacy exhibited by the gentleman, but that he must remember that the law, as such, has no mercy, and knows no distinction of persons; that in his opinion, he was bound, as a good citizen, to testify.

Mr. G. said, feeling bound as a citizen, he would testify, although he regretted the law was such as to compel him.

BANK FUND.—Pursuant to a resolution of the Senate, the Comptroller reported on Tuesday, the amount and condition of the Bank Fund, from which we have prepared the following statement:

Contribution in 1830,	\$26,983 67
" 1831,	62,627 62
" 1832,	94,295 60
" 1833,	105,139 54

Total, \$289,046 43

The investments of the fund are as follows:

Canal debt, bearing an int. of 5 per ct.	\$8,082 40
Astor " " 5 "	92,000 00
General fund, " 4 1/4 "	178,026 01

\$278,108 41

There is due from the revenue to the capital, the sum of \$10,938 03, which, with the sum invested, constitutes the whole amount of the fund. The amount of revenue due to the capital, must, by the provisions of the act creating the land, be paid before any part can be paid to the corporations. The revenue for the current year will amount to \$11,235 34.—[Argue.]

NEW POST OFFICE.—A new Post Office has been established in the town of Scaghticoke, Rensselaer Co., N. Y., called *Old Scaghticoke*, and Aaron A. Marcellus appointed Post Master.

[From the Pittsburgh Gazette of Feb. 19.]
Flour was sold in this city, yesterday, at \$2 62 1/2. Can persons, who declare that there is no pressure in the money market, account for this reduction in price?

[From the Mercantile Advertiser.]
About 100 tons of ice carried from Boston to Calcutta, by the Tuscan, had been landed free of duty, and orders given to extend the same favor to similar cargoes from whatever quarter. It was selling at 6 1/4 cents per pound.

Supposing the whole 100 tons to sell at the above rate, it would produce twelve thousand five hundred dollars, upon an investment, probably, including the cost of all the extra precautions for preserving the ice, of \$500.

AN INTERESTING AND USEFUL MAP.

A friend of ours has now in a state of forwardness, a Map upon which will be delineated nearly all the Railroads now chartered in the U. States. It is designed to show the present contemplated connexion of the different lines, as well as where others may hereafter be constructed to connect with them. It will be completed in a few weeks, and may be had either in sheets, or put up in morocco for pocket maps, in any quantity, by applying to the subscriber.
D. K. MINOR, 35 Wall street.
New-York, August 14, 1833.

INCOMBUSTIBLE ARCHITECTURE.

INCOMBUSTIBLE dwelling-houses and buildings of all kinds devised or built in New-York, or any part of the United States, as cheap as any other combustible buildings. Actual buildings and houses rendered incombustible at a small additional expense.

SHIPS of all sorts, and Steamboats, rendered incombustible, and not liable to sink, at a small expense.

For sale, 10,000 lbs. of ANTIGNIS, or incombustible Varnish, at one dollar per lb.

Apply to C. S. RAFFINESQUE, Professor of Hist. and Nat. Sciences, Chemist, Architect, &c. in Philadelphia, No. 59 North 8th street. A pamphlet given gratis.

References in New-York.—Mr. Minor, Editor of the Mechanical Magazine; Messrs. Rushon & Aspinwall, Druggists. Editors in the city or country, copying this advertisement, will receive a commission on any contract procured by their means.
D. K. MINOR, 35 Wall street.



SURVEYING AND NAUTICAL INSTRUMENT MANUFACTORY.

EWING & HEARTY, at the sign of the Quadrant, No. 53 South street, one door north of the Union Hotel, Baltimore, beg leave to inform their friends and the public, especially Engineers, that they continue to manufacture to order and keep for sale every description of Instruments in the above branches, which they can furnish at the shortest notice, and on fair terms. Instruments repaired with care and promptitude. For proof of the high estimation on which their Surveying Instruments are held, they respectfully beg leave to tender to the public perusal, the following certificates from gentlemen of distinguished scientific attainments.

To Ewing & Hartly.—Agreeably to your request made some months since, I now offer you my opinion of the Instruments made at your establishment, for the Baltimore and Ohio Railroad Company. This opinion would have been given at a much earlier period, but was intentionally delayed, in order to afford a longer time for the trial of the Instruments, so that I could speak with the greater confidence of their merits, if such they should be found to possess.

It is with much pleasure I can now state that notwithstanding the Instruments in the service procured from our northern cities are considered good, I have a decided preference for those manufactured by you. Of the whole number manufactured by the Department of Construction, to wit: five Levels, and five of the Compasses, not one has required any repairs within the last twelve months, except from the occasional imperfection of a screw, or from accidents, to which all Instruments are liable. They possess a firmness and stability, and at the same time a neatness and beauty of execution, which reflect much credit on the artists engaged in their construction.

I can with confidence recommend them as being worthy the notice of Companies engaged in Internal Improvements, who may require Instruments of superior workmanship.

JAMES F. STABLER,
Superintendent of Construction of the Baltimore and Ohio Railroad.

I have examined with care several Engineers' Instruments of your Manufacture, particularly Spirit Levels, and Surveyors' Compasses; and take pleasure in expressing my opinion of the excellence of the workmanship. The parts of the levels appeared well proportioned to secure facility in use, and accuracy and permanency in adjustments.

These Instruments seemed to me to possess all the modern improvement of construction, of which so many have been made within these few years; and I have no doubt but they will give every satisfaction when used in the field.

WILLIAM HOWARD, U. S. Civil Engineer.
Baltimore, May 1st, 1833.

To Messrs Ewing and Hartly.—As you have asked me to give my opinion of the merits of those Instruments of your manufacture which I have either used or examined, I cheerfully state that as far as my opportunities of my becoming acquainted with their qualities have gone, I have great reason to think well of the skill displayed in their construction. The neatness of their workmanship has been the subject of frequent remark by myself, and of the accuracy of their performance I have received satisfactory assurance from others, whose opinion I respect, and who have had them for a considerable time in use. The efforts you have made since your establishment in this city, to relieve us of the necessity of sending elsewhere for what we may want in our line, deserve the unqualified approbation and our warm encouragement. Wishing you all the success which your enterprise as well merits, I remain, yours, &c.

L. H. LATROBE,
Civil Engineer in the service of the Baltimore and Ohio Railroad Company.

A number of other letters are in our possession and might be introduced, but are too lengthy. We should be happy to submit them upon application, to any persons desirous of perusing the same.

TO RAILROAD COMPANIES.

PROFESSOR RAFFINESQUE, of Philadelphia, will undertake to build CARS that will carry along their own railway, and may be used on level or M'Adam roads. They will save ten millions of money to be wasted on 1000 miles of iron railroads to be laid in the United States within a few years, and dispense with tracks and double tracks. These Cars may be drawn by horses or steam. He claims to have discovered them ever since 1823, by his savings filed in the Patent Office. Apply, post paid.
RAFFINESQUE & CO.

TOWNSEND & DUFFEE, of Palmyra, Adams, manufacturers of Railroad Rope, having removed their establishment to Hudson, under the name of Duffee, May & Co. offer to supply Rope of any required length (without splice) for inclined planes of Railroads at the shortest notice, and deliver them in any of the principal cities in the United States. As to the quality of Rope, the public are referred to J. B. Jarvis, Esq. M. & H. R. Co., Albany; or James Archibald, Engineer Hudson and Delaware Canal and Railroad Company, Carbondale, Luzerne county, Pennsylvania.
Hudson, Columbia county, New-York,
January 29, 1833.

ALBANY SEED-STORE AND HORTICULTURAL REPOSITORY.

The subscriber having resumed the charge of the above establishment, is now enabled to furnish traders and others with FRESH GARDEN SEEDS, upon very favorable terms, and of the growth of 1833, warranted of the best quality.

The greatest care and attention has been bestowed upon the growing and saving of Seeds, and none will be sold at this establishment excepting those raised expressly for it, and by experienced seedsmen; and those kinds imported which cannot be raised to perfection in this country; these are from the best houses in Europe, and may be relied upon as genuine.

It is earnestly requested whenever there are any failures hereafter, they should be represented to the subscriber; not that it is possible to obviate unfavorable seasons and circumstances, but that satisfaction may be rendered and perfection approximated.

Also—French Lucern, White Dutch Clover, White Mulberry Seed, genuine Mangel Wurtzel, Vellow Locust, Ruta Baga, and Field Turnip Seeds, well worth the attention of Farmers.

W. THORNBURN,
347 N. Market st. (opposite Post Office.)

Catalogues may be had at the Store; if sent for by mail, will be forwarded gratis. Orders solicited early, as the better justice can be done in the execution.

Mr. Thornburn is also Agent for the following publications, to wit:—

NEW YORK FARMER and American Gardeners' Magazine.
MECHANICS' MAGAZINE and Register of Inventions & Improvements.

AMERICAN RAILROAD JOURNAL and Advocate of Internal Improvements; and the

NEW-YORK AMERICAN, Daily, Tri-Weekly, and Semi-Weekly; either or all of which may be seen and obtained by those who wish them, by calling at 347 North Market street, Albany.

SURVEYORS' INSTRUMENTS.

Compasses of various sizes and of superior quality, warranted.

Leveling Instruments, large and small sizes, with high magnifying powers with glasses made by Troughton, together with a large assortment of Engineering Instruments, manufactured and sold by
E. & G. W. BLUNT, 154 Water street,
J31 6t. corner of Maidenlane.

ENGINEERING AND SURVEYING INSTRUMENTS.

The subscriber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship to any imported or manufactured in the United States; several of which are entirely new: among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy; also, a Railroad Goniometer with two Telescopes; and a Levelling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes.

WM. J. YOUNG,
Mathematical Instrument Maker, No. 9 Dock street, Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested:
Baltimore, 1833.

In reply to thy inquiries respecting the Instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad. I cheerfully furnish thee with the following information. The whole number of Levels now in possession of the department of construction of thy make is seven. The whole number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Graduation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repairs, except from accidents to which all Instruments of the kind are liable.

I have found that thy patterns for the levels and compasses have been preferred by my assistants generally, to any others in use, and the Improved Compass is superior to any other description of Goniometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a reversing telescope, in place of the vane sights, leaves the engineer scarcely any thing to desire in the formation or convenience of the Compass. It is indeed the most completely adapted to lateral angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying off-rails; and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,
JAMES P. STABLER, Superintendent of Construction of Baltimore and Ohio Railroad.
Philadelphia, February, 1833.

Having for the last two years made constant use of Mr. Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use, and as such most cheerfully recommend it to Engineers and Surveyors.
E. H. GILL, Civil Engineer.
Germantown, February, 1833.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these Instruments admirably calculated for laying out Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY B. CAMPBELL, Eng. Philad.
ml 1y Germant. and Norrist. Railroad

The North River is now open; and the steam-boats Constitution and Constellation run daily.

We have by the boat that came down last night, the Albany papers of yesterday morning.

APPOINTMENTS BY THE PRESIDENT.

By and with the advice and consent of the Senate.

H. T. Williams to be Surveyor General of Public Lands in the State of Louisiana, in the place of H. B. Trist, resigned.

James Corcoran to be Consul for Londonderry, in Ireland.

William J. Dubbs to be Consul for Maracaibo, in the Republic of Colombia in the place of Alfred Laussat resigned.

William A. Magill to be Consul for the Island of Martinique, in the place of John S. Miereken, deceased.

Alexander Schwartz to be Consul for Riga, in Russia.

Charles J. Smith to be Consul of the United States at Para, in Brazil, in the place of Abraham R. Smith, resigned.

FOREIGN VARIETIES.

The Seine, at Paris on Tuesday, 31st Dec., rose nearly to the height of the great flood in 1740, filling the cellars, sweeping goods off the wharves, and creating much alarm in its vicinity.

Mr. Lander reached Liverpool on Wednesday, 1st January, in the Columbine, from Fernando Po. He is in excellent health, after his perilous expedition into the interior of Africa.

Cashmere Shawl Manufacture.—It is computed that there are now not less than 50,000 artisans engaged throughout Scotland in the manufacture of shawls from the Cashmere or Thibet goat. The yarn for the purpose is obtained from France.

American Forest Trees.—Public attention seems to be turning, by those who desire ornamented plantations, to the great variety and beauty of our forest trees; and particularly the oaks. "To these," says a writer on this subject, "who vindicate the practice of exclusively planting native trees, as most suitable to the country, it is answered, that they might as well refuse to grow pine apples, because they do not spring up wild in our woods, as reject the brilliant tints of the American forest trees, because nature has clothed ours in a more sombre tinge."—Above 40 specimens of American oaks are now constantly planted for sale, in the nurseries about London. We were not aware that the *Live Oak* would stand the climate of England, but mention is made of several in different parts of the kingdom, and of one particularly, a large one, in Lord Pembroke's Park at Wilton.

Sir John Herschel.—This distinguished astronomer and true philosopher, has sailed for the Cape of Good Hope—there to observe the starry wenders of the Southern sky. "To the sincere and enlightened philanthropist, it may afford," it is finely argued, "matter for proud and consoling reflection, to consider this philosopher, this emissary from European civilization, tranquilly seated in Africa at the farther extremity of that barbarous and inhospitable continent—and nightly, in what was a howling desert, only tenanted by the tiger and the hyena, or the wandering savage, scarcely more humanized—pursuing undisturbed his high vocations."

John Galt.—This well-known writer, whose precarious health for some time past, had little justified any hope of ultimate recovery, seems quite restored; and has appeared in two recent works—one in three volumes, prose, consisting of various tales, under the title of "Stories of the Study," and another of "Poems."

The Marquis of Nige.—This nobleman who is appointed Governor of the island of Jamaica, was some 20 years ago tried before Sir Wm. Scott for inveigling British seamen from King's ships, to man his yacht in the Mediterranean. He was found guilty, and sentenced to several months' imprisonment in Newgate, which he underwent. His mother, then a widow, went into Court to intercede for her son. The stern and upright Judge was inac-

cessible; but the man was touched by the scene and by the conduct of the mother; and she soon after became the wife of Sir Wm. Scott.

* * At the commencement of the last year I offered to send the American *tri-weekly* instead of *semi-weekly*, together with two of my periodicals, in exchange to those who would publish my advertisements of the different periodicals. In consequence of this notice, the exchange list was increased to 165. I soon found that the expense would be greater than I had anticipated, yet I had made the offer, and would of course continue it through the year—as I have done. I however find it too expensive to continue to send as heretofore. The circulation of my PERIODICALS, (upon which the expense falls,) will not warrant it, and I must, therefore, notwithstanding the uniform kindness with which they have been treated by those to whom they have been sent, materially reduce their exchange list.

The *semi-weekly* American will hereafter be sent in exchange to those who will publish the following advertisements a few weeks for the difference of price. *New-York, January 20, 1834.*

VOL. III. OF THE RAILROAD JOURNAL AND ADVOCATE OF INTERNAL IMPROVEMENTS is published once a week in quarto form, with 16 pages to each number, at \$3; or in *semi-monthly* form, of 32 pages, stitched in a cover of colored paper, at \$4 per annum, in advance. The first and second volumes of the Journal may be had in two parts to the year, either stitched in covers or bound in boards, at the subscription price, with price of binding, in one part, 50 cents, in two parts \$1 per volume. Those in covers may be sent by mail to any part of the country, the same as a magazine. Published at No. 35 Wall st., New-York, by D. K. MINOR, Editor and Proprietor.

THE MECHANICS' MAGAZINE AND REGISTER OF INVENTIONS AND IMPROVEMENTS is now just commencing its second year. It will be continued in a manner altogether superior to that of the first year. It has drawn forth many valuable correspondents, in different parts of the country, with the assistance of whom, and those who may hereafter contribute to its columns, together with the ability of Mr. JOHN KNIGHT, formerly, and for several years, proprietor and publisher of the LONDON MECHANICS' MAGAZINE, who is engaged as Editor, the proprietor has no hesitation in saying that it will be found worthy of an extended circulation and a liberal support. The first year, or two first volumes, having been stereotyped, may now be had either in numbers, or bound in boards—either at wholesale or retail. Price \$1 50 per vol. in numbers, or \$1 75 in boards, or \$3 per annum. A liberal discount made to the trade. Published by the proprietor, D. K. MINOR, at No. 35 Wall st. N. Y.

THE NEW-YORK FARMER AND AMERICAN GARDENER'S MAGAZINE, has commenced the second volume of a new series. It is published once a month, in quarto form of 32 pages to each monthly number, at \$3 per annum in advance. The last volume may be had either stitched in a cover, so as to be sent by mail, or in boards. Price, stitched, \$3 25; in boards, \$3 50. Each subscriber who pays in advance, or previous to the first of April, free of postage or commission, will be entitled to eight additional pages to each monthly number, or 96 extra pages to the volume. Published at No. 35 Wall street, N. Y. D. K. MINOR, Proprietor.

A QUARTERLY JOURNAL OF AGRICULTURE AND MECHANICS will hereafter be published at the same office. Each quarterly number will contain about 300 large octavo pages, embracing the most choice articles from the best agricultural and mechanical publications both in America and Europe. It will form 2 volumes to the year, of about 640 pages each, and will be put up like other quarterly publications, so as to be sent by mail. Price, \$5 per annum, in advance.

N. B. A small edition only will be published.

D. K. Minor also publishes the **NEW-YORK AMERICAN**, daily, *tri-weekly*, and *semi-weekly*.

Also, the **PLOUGH-BOY**, a cheap agricultural publication, of eight quarto pages, is issued once a week, at \$1 50 per annum, in advance. It contains much interesting reading upon agriculture, &c.

All Letters and Communications for the above publications, may be addressed, free of postage, to D. K. MINOR.

A scientific person versed in Mechanics, Chemistry and Mineralogy, of several years practical experience in different branches of Civil Engineering, and who is also a good draughtsman, is desirous of obtaining employment either as an instructor in some public institution, or as an Engineer upon some private or public work.

He was educated at one of the first scientific institutions in the United States, and was for several years an instructor in the said institution.

A line addressed to B. at Railroad Journal Office, No. 35 Wall street, will meet with immediate attention.

NOVELTY WORKS,

Near Dry Dock, New-York.

THOMAS B. STILLMAN, Manufacturer of Steam Engines, Boilers, Railroad and Mill Work, Lathes, Presses, and other Machinery. Also, Dr. Nott's Patent Tubular Boilers, which are warranted for safety and economy, to be superior to any thing of the kind heretofore used. The fullest assurance is given that work shall be done well, and on reasonable terms. A share of public patronage is respectfully solicited. m18

STEPHENSON,

Builder of a superior style of Passenger Cars for Railroads No. 264 Elizabeth street, near Bleeker street, New-York.

RAILROAD COMPANIES would do well to examine these Cars; a specimen of which may be seen on that part of the New-York and Harlem Railroad, now in operation. J25 17

RAILROAD CAR WHEELS, BOXES AND OTHER RAILROAD CASTINGS.

Also, AXLES furnished and fitted to wheels complete at the Jefferson Cotton and Wool Machine Factory and Foundry, Paterson, N. J. All orders addressed to the subscribers at Paterson, or 60 Wall street, New-York, will be promptly attended to. Also, CAR SPRINGS.

Also, Flange Tires turned complete.

J8 ROGERS, KETCHUM & GROSVENOR.

LOCOMOTIVE ENGINES.

THE AMERICAN STEAM CARRIAGE COMPANY, OF PHILADELPHIA, respectfully inform the public, and especially Railroad and Transportation Companies, that they have become sole proprietors of certain improvements in the construction of Locomotive Engines, and other railway carriages, secured to Col. Stephen H. Long, of the United States Engineers, by letters patent from the United States, and that they are prepared to execute any orders for the construction of Locomotive Engines, Tenders, &c. with which they may be favored, and pledge themselves to a punctual compliance with any engagements they may make in reference to this line of business.

They have already in their possession the requisite apparatus for the construction of three classes of engines, viz. engines weighing four, five, and six tons.

The engines made by them will be warranted to travel at the following rates of speed, viz. a six ton engine at a speed of 15 miles per hour; a five ton engine at a speed of 18 miles per hour; a four ton engine at a speed of 22 1/2 miles per hour. Their performance in other respects will be warranted to equal that of the best English engines of the same class, with respect not only to their efficiency in the conveyance of burdens, but to their durability, and the cheapness and facility of their repairs.

The engines will be adapted to the use of anthracite coal, pine wood, coke, or any other fuel hitherto used in locomotive engines.

The terms shall be quite as favorable, and even more moderate, than those on which engines of the same class can be procured from abroad.

All orders for engines, &c. and other communications in reference to the subject, will be addressed to the subscriber, in the city of Philadelphia, and shall receive prompt attention.

By order of the Company, WILLIAM NORRIS, Secretary.

December 24, 1833.

For further information on this subject see No. 49, page 772 of this Journal. d2

TO STEAMBOAT COMPANIES.

PROFESSOR RAFFINESQUE, of Philadelphia, offers his services to render steamboats incombustible, and not liable to sink, even by the bursting of boilers, or striking against snags, sawyers and rocks. This will save many boats, much property, and the lives of hundreds every year. Those who neglect this easy improvement, deserve to be neglected and derided by the public as unmindful of safety. Apply, post paid. S1 R J M M & F

NOTICE TO MANUFACTURERS.

SIMON FAIRMAN, of the village of Lansingburgh, in the county of Rensselaer, and state of New-York, has invented and put in operation a Machine for making Wrought Nails with square points. This machine will make about sixty six nails, and about forty 100 nails in a minute, and in the same proportion larger sizes, even to spikes for shins. The nail is hammered and comes from the machine completely heated to redness, that its capacity for being clenched is good and sure. One horse power is sufficient to drive one machine, and may easily be applied where such power for driving machinery is in operation. Said Fairman will make, vend and warrant machines as above, to any persons who may apply for them as soon as they may be made, and on the most reasonable terms. He also desires to sell one half of his patent right for the use of said machines throughout the United States. Any person desiring further information, or to purchase, will please to call at the machine shop of Mr. John Humphrey, in the village of Lansingburgh.—August 15, 1833. A201 F R M & F

RAILWAY IRON.

Ninety-five tons of 1 inch by 1/2 inch,	Flat Bars in lengths of 14 to 15 feet counter sunk holes, ends cut at an angle of 45 degrees with splitting plates, nails to suit.
200 do. 1 1/2 do. 1 do.	
40 do. 1 1/2 do. 1 do.	
800 do. 2 do. 1 do.	
800 do. 2 1/2 do. 1 do.	
soon expected.	

250 lbs. of Edge Rails of 36 lbs. per yard, with the requisite chairs, keys and pins. Wrought Iron Rims of 30, 33, and 36 inches diameter for Wheels of Railway Cars, and of 60 inches diameter for Locomotive wheels.

Axles of 24, 28, 32, 34, and 36 inches diameter for Railway Cars and Locomotives of patent iron.

The above will be sold free of duty, to State Governments, and incorporated Governments, and the Drawback taken in part payment.

A. & G. BALSTON.

Models and samples of all the different kinds of Rails, Chairs, Pins, Wedges, Spikes, and Splicing Plates, in use, both in this country and Great Britain, will be exhibited to those disposed to examine them. d15mow